

Inscomm: 'Preview' To Stay

Student Union Plans Also Reviewed

The continuation of "Preview," and the Student Union plans were again considered by Inscomm at its meeting last Thursday, Dec. 7 at 7:30.

Inscomm decided that "Preview" does provide a service to the MIT community and should be continued. Among the suggestions proposed for improving "Preview" was a notice to all living groups and activities which would explain the procedure for placing an announcement in "Preview," and provide information about advertising. A form for submitting an announcement would be included in the flier. "Preview" has al-

ready taken action on this suggestion. Proposals were made that "Preview" indicate the level of the many seminars and talks offered at MIT and obtain more information concerning events at other schools in the area. In answer to criticism of the success of advertising in "Preview," it was pointed out that the renewal rate has been quite good, although it does vary among the various advertisers.

Plans for the Student Union have progressed with further discussion of the important problem of space allotment. The question of the best number

and best size of meeting rooms is a major planning problem. Six or seven student lounges will be provided in the Union, although some doubt concerning the adequacy of this number has been expressed. A ballroom, planned to accommodate 250, will also be available for use as an auditorium with a seating capacity between those of Kresge and the Little Theater. Mr. Catalano, the architect for the Union, feels that sliding partitions suggested for the ballroom are impractical from standpoints of space, cost and acoustics. The installation of commercial facilities such as a laundry, bank, book store and a delicatessen and pastry shop was suggested. The cost of installing these facilities would be paid for by rent.

In a report concerning the undergraduate seminars, SCEP said that 25 of the 40 instructors involved are enthusiastic about the program, and all have not been interviewed. The seminars are still in the experimental stage, and further studies of them will be made.

Plans to have three rooms on the first floor of building two open for use as study rooms have been approved by Dean Wadleigh. These rooms will be open until 12 midnight on a trial basis. If the trial is successful the rooms may be open until 1:30 or 2 a.m. every night except Sunday.

T. S. Eliot, Noted Poet And Playwright, Speaks At Kresge Auditorium Tonight

T. S. Eliot, internationally known British poet and playwright, will speak at Kresge auditorium tonight at 8 p.m. An infrequent speaker, Mr. Eliot is giving only three lectures

while he is visiting friends and relatives in the United States.

Mr. Eliot will read and comment on some of his works during his talk. It is doubtful that he will read any previously unpublished work, although he did read two new poems at an earlier lecture given at Boston College.

Eliot, an 85-year-old Nobel Prize winner in literature, is best known for his play "Murder in the Cathedral" and the poem "Wasteland," a tragic tale of the American West. Although he is a British citizen, T. S. Eliot was born in America and many of his works are written about this country.

Distribution of tickets began Monday morning, and all seats were "sold out" within an hour and a half. However, any places unclaimed by 7:50 p.m. will go on a first come, first served basis.



T. S. Eliot

Jobs, Study Overseas

Foreign Opportunities Abound

Inscomm's Foreign Opportunities Committee, headed by Tom Morgenstern, was established to help MIT students secure temporary foreign employment and to help develop a workable program for foreign study.

The committee is attacking the search for overseas jobs from many angles. Letters are being sent to important foreign embassies to discover if organizations which might be able to help place MIT students exist within these countries. At the same time, the committee will be sending letters to major foreign companies to discover if they have unpublicized job opportunities.

The faculty is also being approached to obtain names of industries, and companies within industries, which might be particularly likely to have jobs available for MIT students. While most faculty members are willing to help, only a few names have been obtained. Another more fruitful approach has been to talk with foreign students here at Tech. Many of them are quite aware of the opportunities available in their countries.

Possibilities of a summer exchange program are being investigated. Under such a program, an MIT student would work abroad for the summer, and a foreign student would be found a job here. A junior year abroad program is being discussed which would give students regular Institute credit for overseas study.

Other members of the committee are examining opportunities within the Peace Corps program. In the near future, a panel discussion with Harvard will cover some important aspects of the corps. A taped interview with Peace Corps head Sargent Shriver will be played on Inscomm Open line over WTBS.

A program called "Classrooms Abroad" may be valuable to students who wish to learn a foreign language in a foreign country.

Invitation

President and Mrs. Julius A. Stratton cordially invite all students remaining on campus during the holidays to a Christmas Open House at their home, 111 Memorial Drive, on Friday, Dec. 22 from 4 to 6 p.m.

Russian Ambassador Menshikov Will Lecture Here January 10

It has been three years since MIT first approached Mikhail A. Menshikov, Ambassador Extraordinary and Plenipotentiary of the Union of Soviet Socialist Republics, on the subject of speaking here at MIT about Soviet foreign policy. The subsequent and elaborate negotiations since have culminated in LSC's announcement that Mr. Menshikov will appear at Kresge Auditorium Jan. 10, 1962, at 8 p.m. His Wednesday evening lecture followed by a 30 minute question period will, LSC hopes, be "received less violently than Fidel Castro and tuition raises were last year."

Though Menshikov has not specified that of which he will speak, the doings at the 22nd Congress of the Communist Party, which he attended this past summer, or peaceful co-existence, or total disarmament, seem likely topics.

A degree in economics, with emphasis on international trade, shaped much of Menshikov's middle years. First he directed Soviet trade in grain and other food products, later trade in products of the timber industry. In '46 he was made Deputy Minister of Foreign Trade. Mikoyan was Minister

(Please turn to page 3)

Christmas Convocation At Kresge 11 AM Friday Dean Burchard To Speak

The annual All-Institute Christmas Convocation will be held in Kresge Auditorium on Friday morning, Dec. 15 at 11 o'clock.

This year the main speaker will be Dean John E. Burchard of the School of Humanities and Social Science. Also participating in the program will be President Julius A. Stratton and Undergraduate Assn. President Frank Osha.

Carol singing in the lobby will follow the convocation. Refreshments will be served.

All classes will be cancelled between 11 and noon. Everyone is cordially invited.

\$120,000 Computer Donated

A high-speed digital computer to be used in teaching students the principles and operation of modern electronic data processing equipment has been donated to MIT by the Digital Equipment Corporation of Maynard, Massachusetts.

The \$120,000 computer, a "Programmed Data Processor" (PDP-1) manufactured by D.E.C., was formally presented last week by Kenneth H. Olsen, president of the Maynard electronics concern. Dr. Charles H. Townes, Provost, accepted the gift on behalf of the Institute and the department of Electrical Engineering.

Olsen, who received both his bachelor and master of science degrees in electrical engineering here, stressed the importance he

and his colleagues attach to acquainting students with computer techniques and training them in computer operation.

"The usefulness of computers is still limited by a general feeling that they are new and strange," Olsen explained. "It is essential for modern, high-speed computers to be introduced to engineering students early in their education in a natural and informal way."

"Since many of the men now in key positions at Digital trained at MIT, we are particularly anxious for more students to have this opportunity. We hope that our gift will make it possible for more undergraduates to sit before a real computer, to communicate with it, and to learn exactly what it can do."

In accepting the computer Dr. Townes said "The growing importance of computers and computer technology makes this gift of a D.E.C. computer a welcome addition to our educational program and research facilities. A short

while ago, Mr. Olsen was developing ideas and techniques for some of the earlier forms of computers at M.I.T. His generosity now as the head of the Digital Equipment Corporation will help give a slightly later MIT generation the best available tools and will assist them in learning and building on modern computer techniques."

The new computer will occupy (Please turn to page 7)

Invite MIT Students To Sing The Messiah

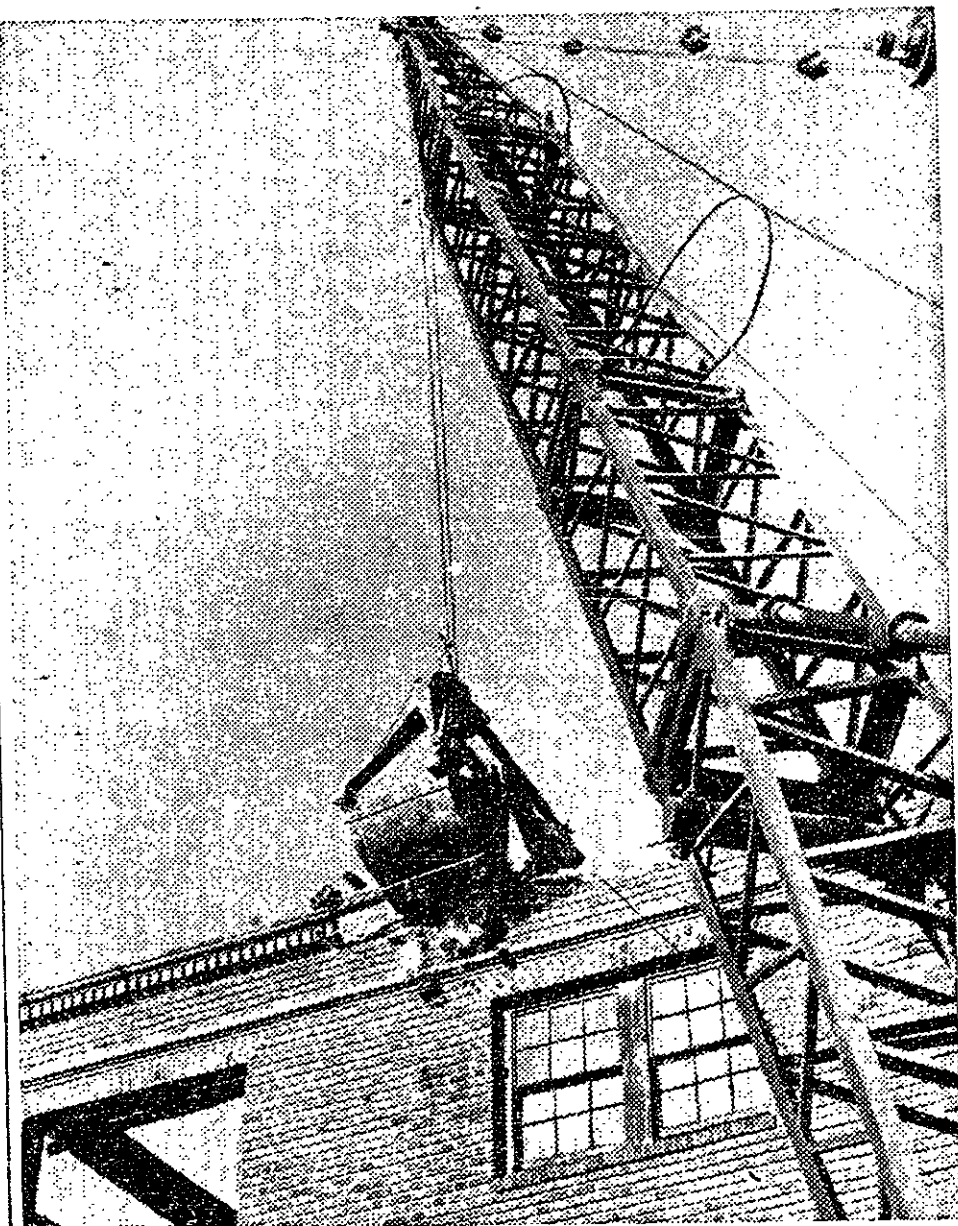
The MIT Choral Society, Glee Club, and Symphony Orchestra, invite students to sing with them in a presentation of Handel's Messiah, under the direction of Klaus Liepman. The performance will be held at 7:30 Friday in Kresge.

Students should bring their own musical scores if possible.

Tuesday Issue

The Tech will be published Tuesday, rather than Wednesday, next week.

WGBH Razing Begun



— Photo by Conrad Grundlener '64

Wreckers went to work last week on the WGBH building, destroyed by fire in October. The Student Union is planned for the site.



Not this: a student who
drowns over books no matter
how much sleep he gets.

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sharp! NoDoz keeps you
awake and alert—safely!

If you sometimes find studying soporific (and who doesn't?), the word to remember is NoDoz.® NoDoz perks you up in minutes, with the same safe awakener found in coffee or tea. Yet NoDoz is faster, handier, more reliable. Absolutely non-habit-forming, NoDoz is sold everywhere without prescription. So, to keep perspicacious during study and exams—and while driving, too—always keep NoDoz in proximity.

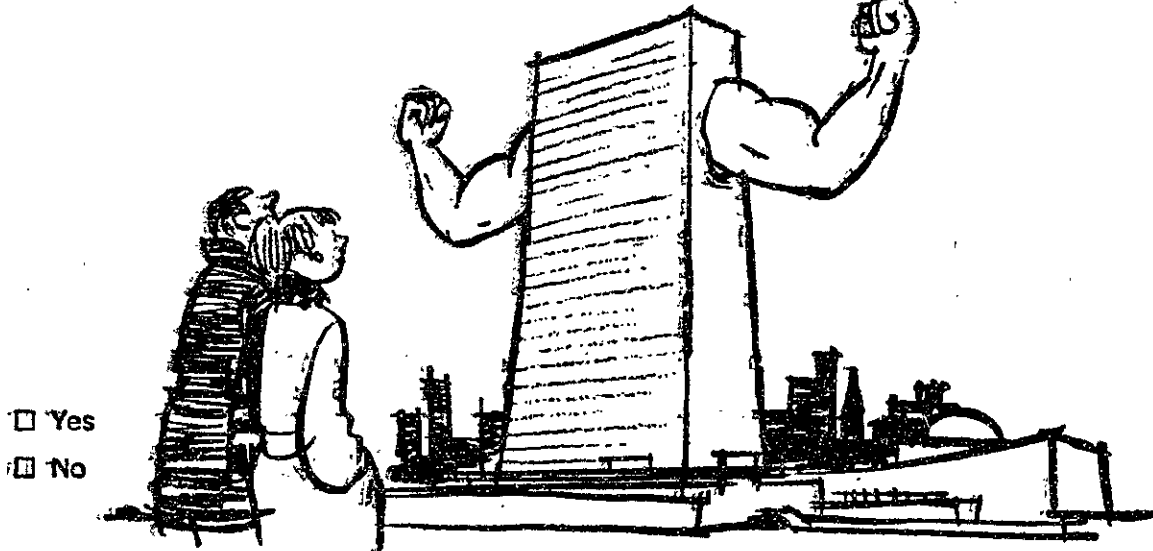


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Subscribe to **The Tech**

Check your opinions against L&M's Campus Opinion Poll '64

❶ Will the U.N. grow stronger in the next 10 years?



☐ Yes
☐ No

❷ Which is most important to you in picking a date...



☐ Looks ☐ Personality ☐ Intelligence

❸ Do you buy cigarettes in soft pack or box?



☐ Soft pack
☐ Box

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There's actually more rich-flavor leaf in L&M than even in some unfiltered cigarettes. You get more body in the blend, more flavor in the smoke, more taste through the filter. So expect more, get Lots More from L&M. And remember—with L&M's modern filter, only pure white touches your lips.



HERE'S HOW 1029 STUDENTS AT 100 COLLEGES VOTED!

Have an L&M in pack or box	
Box	31%
Soft pack	69%
Intelligence	16%
Personality	65%
Looks	19%
No.	69%
Yes	31%

Get with the Grand Prix... Enter today, enter in spirit!

CALENDAR of EVENTS

*Open to the public
Wednesday, December 13

OPERATIONS RESEARCH CENTER.*
Seminar: "Single and Double Ended Queues." Professor Samuel M. Givens, Associate Professor of Mathematics, Northeastern University.
Room 1-146, 2:00 P.M.

ELECTRONIC SYSTEMS LABORATORY.*
Seminar: "Logical Design of Threshold Switching Circuits." Professor Elitch Goto.
Room 26-222, 3:00 P.M.

MIT HILLEL SOCIETY.
Study Group: "Towards a Social Philosophy."
317 Memorial Dr., 3:00 P.M.

A.N.S. NUCLEAR ENGINEERING SOCIETY.*
Seminar: "Current Status of the Four Factor Formula." Jack Chernick, Director, Reactor Physics Dept., Brookhaven National Laboratory.
Building NW-12, Room 222, 4:00 P.M.

ARCHITECTURE LECTURE SERIES.*
"Three-Dimensional Structures and the Mechanization of Structural Design." Dr. Henry J. Cowan, Head of the Department of Architectural Sciences, University of Sydney, Australia.
Exhibition Room, 7-435, 4:30 P.M.

DEPARTMENT OF BIOLOGY.*
Seminar: "Dimensional Analysis in Biology." Dr. Walter Stahl, University of Oregon, Tea in Room 16-711 at 4:00 P.M.
Room 16-310, 4:30 P.M.

TECHNOLOGY CATHOLIC CLUB.*
Meeting: "The Psychology of Sin." Father Michael E. Stock, O.P.
Miller Room, 3-707, 5:00 P.M.

Thursday, December 14

SEMINAR SPONSORED BY THE PROTESTANT MINISTRY.*
Seminar in New Testament Greek. Dr. Goetichius, Episcopal Theological School.
317 Memorial Dr., 7:30 P.M.

LECTURE SERIES COMMITTEE.*
Readings: T. S. Eliot will read selections from his poetry. Free tickets for the MIT Community are available in the lobby of Building 10.
Kresge Auditorium, 8:00 P.M.

HILLEL SOCIETY.*
Israeli Dancing. Admission 50c.
Walker Memorial, Room 201, 8:30 P.M.

ORGAN RECITAL.*
Noonday recital by Allen Langard, MIT.
Admission free.
Kresge Auditorium, 12:15 p.m.

DEPARTMENT OF NUCLEAR ENGINEERING.
Seminar: "An Iterative Method for Determination of Control Rod Worth." F. D. Young.
"The Thermodynamic Blanket Problem." W. G. Homeyer. "Dynamics of a Cesium Thermionic Energy Converter." W. L. Brasser.
Building NW-12, 138 Albany St., 3:00 p.m.

DEPARTMENT OF AERONAUTICS AND ASTRONAUTICS.
Fluid Mechanics Seminar: "Philosophy of Fusion Machines." Professor David Rose, Department of Nuclear Engineering, MIT.
Coffee in the duPont Room (33-207) at 3:30 p.m.

Room 35-225, 4:00 p.m.
MIT HILLEL SOCIETY.
Study group: "Basic Concepts of Judaism."
317 Memorial Drive, 4:00 p.m.

DEPARTMENT OF PHYSICS.
Colloquium: "Photon Absorption Cross Sections." Dr. H. W. Koch, U.S. Department of Commerce, National Bureau of Standards, Tea in the John Pickering Room (26-414) at 3:30 p.m.

Room 26-100, 4:00 p.m.
TECHNOLOGY MATRONS.
Annual Christmas Party. Musical program of short selections by the Matrons Choral Group, the Brass Choir, and the Logarithms. Punch and light refreshments will be served. Husbands and guests invited.
Lobby, Main Entrance, 4:00-6:00 p.m.

DEPARTMENT OF MATHEMATICS.
BRANDEIS-HARVARD-MIT MATHEMATICS COLLOQUIUM.*
Speaker: Professor Paul Olum, Cornell University. Tea in the Rabb Graduate Lounge at 4:00 p.m.

Rabb Graduate Center, Brandeis University, 4:30 p.m.
WATER POLO CLUB.*
Meeting.
Alumni Pool, 6:30 p.m.

DEPARTMENT OF HUMANITIES.*
Lecture: "Roman Political Thinking Under the Early Empire." Sir Ronald Syme, Camden Professor of Ancient History, Oxford University.
Kresge Auditorium, 8:00 p.m.

Friday, December 15

CHRISTMAS CONVOCATION.
The entire MIT community is invited to attend the Christmas Convocation, sponsored by the Dean's Office, the Undergraduate Association, the Matrons and the Dames. Speaker, Dean John E. Burdard.
Kresge Auditorium, 11:00-12:00 noon

TECHNOLOGY DAMES.
Christmas open house at the home of Dean and Mrs. Frederick Fassett.
372 Memorial Drive

DEPARTMENT OF CHEMICAL ENGINEERING: 10.991 SEMINAR.
"Reactions of Polyelectrolytes in Dilute Solutions." Leon Mir.
Room 12-182, 3:00 p.m.

"The Effect of Monochromatic Light on the Rate of a Chemical Reaction." M. Modell.
Room 12-142, 4:00 p.m.

DEPARTMENT OF MECHANICAL ENGINEERING.
Seminar: "Researches in Space Flight Technology." Mr. Abe Silverstein, Director, NASA Lewis Research Center, Cleveland, Ohio. Coffee in the Miller Room (3-707) at 3:00 p.m.

Room 1-190, 3:30 p.m.
TECHNOLOGY CATHOLIC CLUB.*
Philosophy Lecture Series: "Free Will and Immortality." Father William Wallace, O.P.
Room 3-133, 5:00 p.m.

LECTURE SERIES COMMITTEE.
Classic film series: "Open City" (Italy, 1945), and "Toccata for Toy Trains." Admission by subscription ticket only.
Room 10-250, 6:30 and 9:00 p.m.

DEPARTMENT OF HUMANITIES.
Sing through Handel's "Messiah," with members of MIT's Choral Society, Glee Club, and Symphony Orchestra. Klaus Liepmann, conductor. If possible bring your own music. Participants only.
Kresge Auditorium, 7:30 p.m.

Saturday, December 16

LECTURE SERIES COMMITTEE.*
Entertainment film series: "Butterfield 8." Admission 30c.
Kresge Auditorium, 5:15, 7:30 and 9:45 p.m.

Sunday, December 17

PROTESTANT CHRISTIAN ASSOCIATION.
Breakfast for Protestant Students.
West Dining Room.
Graduate House, 10:00 a.m.

TECHNOLOGY DAMES.
Children's Christmas Party.
Faculty Club, 3:00 p.m.

DEPARTMENT OF HUMANITIES.*
Organ recital by Victor Mattfeld, Institute Organist, MIT. Admission free.
MIT Chapel, 4:00 p.m.

Monday, December 18

APPLIED MATHEMATICS AND MECHANICS COLLOQUIUM.*
"On the Motion of Flat Plate From Rest in a Viscous Elastic Liquid." Dr. Frank M. Leslie, Mathematics Department, MIT. Tea in Room 2-290 at 3:30 p.m.

Room 2-370, 4:00 p.m.
UNITED CHRISTIAN FELLOWSHIP.*
Christmas Carol Sing.
Little Theatre, Kresge Auditorium, 12:25-12:55 P.M.

POLITICAL SCIENCE SECTION.*
Colloquium: "Calculated Control as a Unifying Concept of International Politics"

and Foreign Policy." Professor J. Rosenow, Rutgers University.
Room 14N-225, 3:00 P.M.

INFORMATION THEORY SEMINAR.
"Cryoelectric Devices for Computations." Dr. Leslie L. Burns, Laboratories, Princeton, N. J.
Room 10-275, 3:30 P.M.

MIT OUTING CLUB.*
Meeting.
Walker Memorial, Room 306, 5:15 P.M.

CHORAL SOCIETY.
Rehearsal.
Kresge Auditorium, 7:30 P.M.

MIT HILLEL SOCIETY.
Study Groups: "Judaism and Modernity."
317 Memorial Drive, 4:00 P.M.

"Gemara Class."
317 Memorial Drive, 7:00 P.M.

"Elementary Hebrew."
Room 5-231, 8:30 P.M.

Tuesday, December 19

DEPARTMENT OF MECHANICAL ENGINEERING PROJECTS LABORATORY COLLOQUIUM.*
"Two Phase Flow in Capillary Tubes." Mr. M. Suo.
Room 3-351, 12:00 NOON

NEUROLOGY SECTION, ELECTRONIC SYSTEMS LABORATORY.
Seminar: "Computer Analysis of Writing." Mr. Harold Levy.
Room 26-217, 2:00 P.M.

PLACEMENT SCHEDULE

December 13

Argonne National Laboratory (6, 8; 2, 18, 22—M, D; 3, 5—D); Addressograph-Multigraph (2, 6—B; 5—M, D); Kearfoot—B, M).

December 14

Argonne National Laboratory (6, 8; 2, 18, 22—M, D; 3, 5—D); Allied Chemical (2, 5—B, M); Rogers Corp. (1, 10—B).

December 15

Operations Evaluation Group (5, 6, 8, 15, 16, 18, 22—M).

December 19

Sanborn Company (6); Sta. Chemical Co. (5; 10—B, M).

COMPUTATION CENTER.*
Seminar: "The Rational Approximation Problem." Professor E. W. Cheney, State University.
Room 8-119, 3:00 P.M.

DEPARTMENT OF CHEMISTRY. PHYSICAL CHEMISTRY COLLOQUIUM.
"Stern-Gerlach Experiment for Chiral Particles." Professor Myer Bloom, University of British Columbia.
Room 14E-310, 4:00 P.M.

MIT HILLEL SOCIETY.
Seminar on Jewish History.
317 Memorial Drive, 4:00 P.M.

DEPARTMENT OF METALLURGY.*
Colloquium: "Process Kinetics in Cobalt and Ceramic Powders." Professor Coble and Professor J. H. Brophy, Department of Metallurgy, MIT.
Room 6-120, 4:00 P.M.

DEPARTMENT OF NAVAL ARCHITECTURE AND MARINE ENGINEERING.*
Seminar: "Constraints on Ship Model Observation of Ocean Wave Spectra." Dr. Stephen Waldron, Applied Science Division of the Operations Evaluation Group. Coffee in Room 5-311 at 3:30 P.M.

Room 3-370, 4:00 P.M.
MIT HILLEL SOCIETY.*
Study Group.
Morse Hall, Walker Memorial, 5:00 P.M.

PROTESTANT CHRISTIAN ASSOCIATION.
Study Group.
317 Memorial Drive, 5:00 P.M.

Dinner.
West Dining Room, Graduate House P.M.

Study Group.
317 Memorial Drive, 7:30 P.M.

TECHNOLOGY CATHOLIC CLUB.*
Theology Lecture Series: "Baptism." Father William Sullivan, C.S.P.
Room 3-133, 5:00 P.M.

WATER POLO CLUB.*
Meeting.
Alumni Pool, 6:30 P.M.

MIT FACULTY PISTOL AND RIFLE CLUB.*
Greater Boston Pistol League match. Team No. 1 and MIT Team No. 2. Rifle Range, 8:00 P.M.

MIT HILLEL SOCIETY.
Study Group: "Elementary Yiddish." Room 5-203, 8:00 P.M.

Wednesday, December 20

ELECTRONIC SYSTEMS LABORATORY.
Seminar: "Logical Design of Threshold Switching Circuits." Professor Elitch Goto.
Room 26-222, 3:00 P.M.

MIT HILLEL SOCIETY.
Study Group: "Towards a Social Philosophy."
317 Memorial Drive, 3:00 P.M.

SEMINAR SPONSORED BY THE PROTESTANT MINISTRY.*
Seminar in New Testament Greek. Goetichius, Episcopal Theological School.
317 Memorial Drive, 7:30 P.M.

MIT HILLEL SOCIETY.*
Israeli Dancing. Admission 50c.
Walker Memorial, Room 201, 8:30 P.M.

Thursday, December 21
MIT COMMUNITY PLAYERS.
Christmas meeting. Playreading of "Interlude, A Midsummer Night's Dream" directed by Marie Phillips. Dinner 5 p.m. preceded by cocktails at 5:30 p.m. For dinner reservations call Joanne extension 2910.
Faculty Club, 8:00 P.M.

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'Most Accurate' Diffraction Grating To Be Used In New Spectroscope

One of the world's most accurate diffraction gratings, a five-by-ten-inch flat mirror with nearly 75,000 parallel grooves cut into its surface, was used during a popular science lecture at MIT on Sunday, Dec. 11. The spectroscope will help scientists study chemical compounds.

Dr. Richard C. Lord, director of the MIT Spectroscopy Laboratory, spoke on "The Spectroscope and Its Revelations" at 4 p. m. in the Compton Lecture Hall in the year's first public lecture in an annual series.

He showed how spectroscopes, which break up visible and invisible light into its many component colors, have helped scientists study such remote things as the atmospheres of the planets and such near and

tiny things as the atoms in a molecule of water.

Spectroscopes, Dr. Lord stated, show the chemical composition of many chemical compounds with high accuracy, and they can be used to determine the symmetrical positions of individual atoms—far too small to be seen by even the most powerful microscopes—in molecules.

Infrared spectroscopy can show the vibrations of atoms which occur when they have certain symmetrical arrangements within molecules. Indeed, Dr. Lord says, the patterns of vibration are so interesting to the eye that data from a spectroscope were once used to devise a ballet showing the many modes of vibration of atoms in a molecule of benzene.

Wadleigh, Osha On 'Open Line'

This Monday evening at 8 p. m. on WTBS the Public Relations Committee of Incomm will present Dean of Students Kenneth Wadleigh as guest on "Incomm Open Line." On hand also will be Frank Osha, Undergraduate Associate President. The main topic of discussion will be the operation of the Dean's Office and the responsibility of students in student government. To be investigated is the division of responsibility between the students and the administration in regard to student affairs and government.

The telephone lines to the WTBS studios will be open as usual, providing an opportunity to call in questions or to express points of view while the program is in progress. Incomm Open Line is essentially a forum for the exchange of views and opinions.

MIT Students Meet Tonight To Discuss Rational Disarmament

At 5 p. m. today the MIT Student Organization for a Rational Approach to Disarmament and Peace will meet in Room 3-370.

RADP was organized to coordinate and assist the efforts of individual students who have become concerned about the deadly progression of the arms race and who are seeking positive alternatives.

'Career' Is Available To Seniors And Grads

Alpha Phi Omega will again distribute "Career: For the College Man" in the lobby of Building 10 on Wednesday and Thursday, Dec. 13 and 14. The books will be available at no cost to seniors and graduate students.

Fallout, Civil Defense To Be Discussed Tonite By MIT-Harvard Faculty

"Fallout and Civil Defense" will be the topic of an 8 p. m. public meeting tonight at Lowell Hall, Harvard University.

The panel discussion, which is sponsored by the Greater Boston Branch of the Federation of American Scientists, will be moderated by M. Stanley Livingston of Harvard. Participants include Bernard T. Feld of MIT's physics department; Marvin I. Kalkstein of the Air Force Cambridge Residence Labs; Ithiel D. Pool of the economics department, MIT's Center for International Studies; and Max Singer of the Hudson Institute.

T-Club, '62 Dance Follows Basketball

Immediately after the MIT-Harvard basketball game this Saturday, Dec. 16 there will be a dance in Baker Dining Hall. The Victory Dance will be sponsored jointly by the Senior Class and the T-Club. Music will be by a live band.

Tickets are being sold throughout this week in the lobby of Building 10. The price is \$1 a couple. Tickets available are limited by the size of the dining hall.

Immediately before the game the drinking societies of the sophomore, junior and senior classes will meet at Sigma Alpha Epsilon house. SAE is at 484 Beacon St.

New Study Rooms Ready In Bldg. 2

Due to the increased demand for study space in the libraries, the Student Committee on Educational Policy requested that a few rooms be made available for study purposes. For the period beginning Monday, December 11, and extending through Thursday, January 25, the following rooms will be available:

2-132, 5-12 p. m. every day except Saturday.
2-131, 6-12 p. m. every day except Tuesday and Saturday.
2-135, 7-12 p. m. every day except Wednesday and Saturday.

Plenipotentiary Seeks 'Improved Relations'

(Continued from Page 1)
at the time. By 1949 Menshikov had survived several purges to become Minister of Foreign Trade.

His career then took an abrupt shift, in 1954, as he became Ambassador to India. "All of Mr. Menshikov's activities in India were devoted to the development and strengthening of . . . friendly relations between the USSR and India," reports a Soviet press release. After cementing the attested "friendly relations" and pooh-poohing the Red Chinese arms buildup near Tibet, Mr. Menshikov and his family came to the United States (1958) to "improve relations between the two great countries whose peoples have so much in common."

CLASSIFIED ADS

WANTED — Ride to Pittsburgh area for Christmas. Will share costs and driving. Call Carl King, extension 3782, KE 6-1139.

ANNOY your roommates. Learn clarinet now. 10-week basic course starts you playing chamber music and/or jazz. Easy-to-play imported clarinet available for sale or rental. For information call UN 4-3845 after 6:00 p. m.

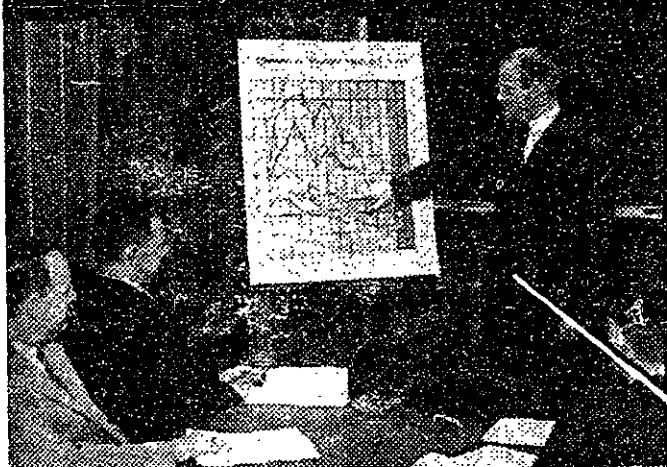
Typed, prepaid classified ads may be submitted to The Tech, Walker Memorial. Rate: 20 cents per 30 character line.

PLANNED TRAINING PROGRAMS to start your career

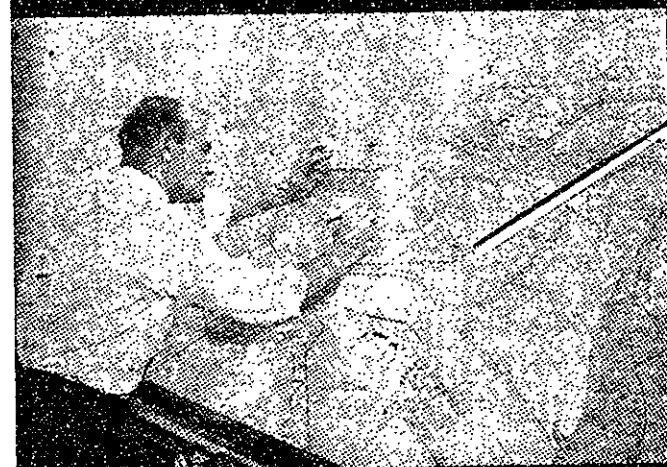
... in one of the nation's fastest growing industries offered by Public Service Electric and Gas Company

... 3rd in revenues among investor-owned electric and gas utilities!

A glimpse of training activities of Gas Cadet Engineer Bob Lindner — Rutgers '59



Leading discussions gives Bob the opportunity to develop management skills.



Planning and scheduling one of the many gas distribution pipeline construction projects.

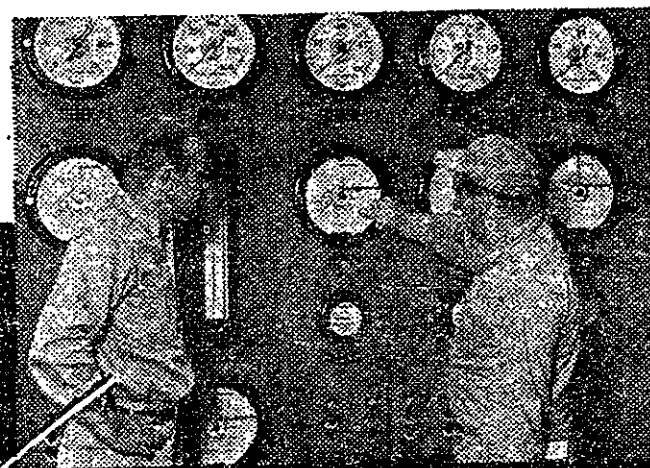


Testing one of the more than 200,000 gas meters repaired at the Meter Shop during 1959.

GAS CADET ENGINEER

COLLEGE TRAINING REQUIRED
Degree in mechanical, industrial, chemical, or civil engineering courses.

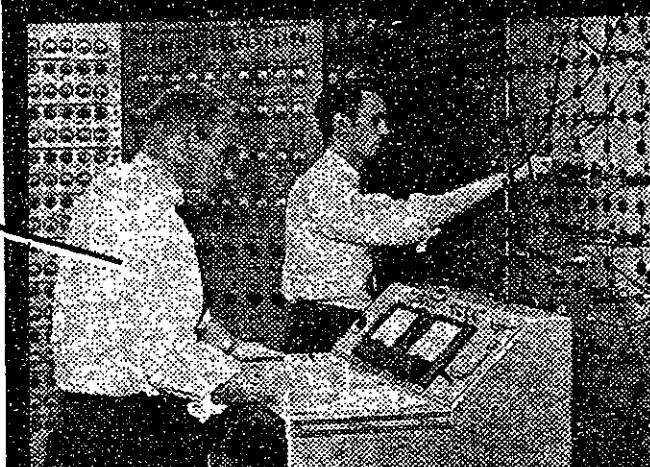
SCHEDULE	TRAINING TIME IN WEEKS
Gas Production Department	
Operation and Maintenance of Gas Producing Equipment	9
Gas Pumping Equipment	1
Gas Conditioning Equipment	1
Boiler Plant Equipment	2
Control Room Operation—Gas Mixing	1
Laboratory Operation	1
Maintenance of Plant Equipment	5
Office and Storeroom Procedures	1
Special Assignments—Plant	3
	24
Gas Distribution Department	
Construction, Operation, and Maintenance of Distribution Piping Systems	12
Installation of Meters and Appliance Servicing	10
District Office Operations	4
Division Office Operations	3
Special Assignments—Division	2
	31
Engineering Department	2
Commercial Operations Department	
District Commercial Office	2
Commercial Operations Department Course—G.O.	1
Vice President and Comptroller's Department	2
Miscellaneous Assignments	1
Network Analyzer	3 days
Utilization Laboratory	1
Meter Repair Operations	1
Appliance School	1
Street Department School	1
Gas Dispatching Operations—Meter Stations	1
Instrument Engineer	1
Planning Engineer	2 days
Underground Piping Protection	1
Corrosion Control	1
Corrosion Surveys	3 days
Distribution Design Engineer	4 days
Customer Service Engineer	3 days
	19
Special Assignments	2
Vacation	2
Total	78



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The Tech

Vol. LXXXI No. 26 Dec. 13, 1961

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Unsigned editorials appearing in THE TECH constitute the opinion of the newspaper's Board of Directors, and not that of MIT. The newspaper welcomes letters from its readers. Space permitting, such letters will be printed in whole or in part, if deemed by the editor to be of sufficient interest or benefit to the community. Brevity increases the chance of publication. Anonymous letters will not be printed. Names will be withheld upon request.

Deadlines: Advertising, noon Thursday. Entertainment, Features, Letters to the Editor, Photography, Sports, noon Sunday. News, 7 p.m. Monday.
 Make-up: Editorial, Sports, Entertainment, Features — Monday, 1-4 p.m.; News, Monday, 7-11 p.m.; Tuesday, 11-1; Wednesday, 12-1; Thursday, 10-12; Friday, 2-5; Sunday, 1-5.

Parietal Hours

We have never looked upon MIT as being particularly Puritan at heart, but the open house hours as they currently exist make one wonder if a bit of the ghost of Jonathan Edwards does not linger somewhere in the subterranean passages. The current rules, as applied to the dormitories, permits residents to sign girls into their rooms until one o'clock on Friday and Saturday nights, and until ten o'clock on other nights.

We realize that these are liberal regulations by the standards of most men's schools. But if liberality is to be the keynote, why not make the rules practical at the same time? We are referring to the ten P.M. witching hour on week nights. Most girls' schools permit their students to be out until twelve or one, or have in some cases, unlimited hours. Why it is immoral or impractical to permit women in rooms after ten o'clock on weekdays, when it is both moral and practical on weekends fails to be clear to us. We wonder if the powers that be prefer the student on a mid-week date to end up on a park bench, etc.

Part of the girls' schools stake in open house hours is knowing that there is a sign-in system so that a girl can be traced if need be. From this point of view, extended hours would be helpful. In any college or university, the problem of "where to go," and of finding a degree of privacy is an acute one. We think that after the past several years of trial, MIT open house rules need some revision.

Study Abroad

A plan, mainly student inspired, is now before a sub-committee of the Institute Committee, and very precariously before the faculty, concerning the idea of a Junior Year Abroad, or something similar, for MIT students. The idea is a good one, and has caused some excitement on the part of those studying it. The committee of students is looking at the feasibility of such a plan, and the mechanism under which it might be put into effect.

There are several plans for foreign exchange now operating at American colleges, the major patterns being set by schools along the lines of Smith College, and Stanford University. The Smith plan, the commonest one, simply places girls in their junior year at college in a foreign school; Stanford University, on the other hand, has actually set up its own campuses in other countries. The Stanford plan undoubtedly makes it simpler to relate courses taken abroad to those

Aren't Paperbacks Wonderful Note: The required text in course 2.751 is *Analysis and Design of Engineering Systems* by Associate Professor Henry M. Paynter, the course instructor. The 300-page tome is published by the MIT Press. Price: \$10.

required by the parent university, as they are taught by the university itself.

But this system loses some of the major assets of study abroad, tending to reduce contact between American students and the foreign country in which they are residing. The Smith plan has the attribute of giving juniors contact with a true European (usually) environment, of living among Europeans, and of taking courses in a foreign language from foreign instructors.

Relating such a system to MIT creates some obvious problems. First, and perhaps foremost, is the question of language. Most plans center around Western Europe of course, and all countries, with the exception of England, present a language barrier with which most MIT students are not trained to cope. The possibility of their being so trained remains.

Secondly, there is the problem of relating course work abroad to that ordinarily done in the junior year at MIT itself. How does one go about determining the level and direction of a French course, for example, in circuit theory? It could be done, but the labor involved might be prohibitive. Yet a third question involves the entire compatibility of the MIT curriculum to that of foreign schools. For the language majors of Smith for example, there is not too much question about the benefits of the foreign exposure, but certain MIT people have reservations about the value of the engineering education in European countries. Is losing the MIT junior year worth the taking of a year of courses of dubious value in some other country?

Various members of the MIT faculty and administration would be inclined to answer these questions in various ways. Some believing that the MIT education is unique and valuable, others that any college education on a reasonably high level suffices, and that the experience in a foreign country far outweighs any loss of courses here. All these questions, and many more will have to be delineated and resolved before concrete proposals can be made to the faculty. The possibilities of foreign study, if only for the experience of a different culture, are very great. The matter should be taken up and studied as completely and quickly as possible.

MIT Literature

The Fall issue of *Tangent* the MIT literary magazine appeared last Friday. It showed that undergraduate intellectual life at MIT, although not flourishing, is not dead; there are a few uncrushed spasms of originality still left in the student body. The quality of the contents, as is usual with experimental magazines, was uneven, but even with its failures, it was a worthwhile effort.

The magazine begins with a fragment of a projected novel by Jean-Pierre Frankenhuis. Despite the nearly complete lack of conventional descriptive detail and the tenuous plot (to be expected in a fragment, after all), it is an interesting and occasionally brilliant work. Presumably later installments will appear in *Tangent*; they will be worth watching for.

The most ambitious and most controversial piece in *Tangent* is R. S. Burns' "On Hot Point," an allegorical short story in diary form which apparently set out to shock hell out of the Philistines and, judging by some comments I've heard, succeeded in part. The physical scene is a desolate peninsula where the narrator and a girl make love on the beach and where he brutally murders her.

Even with the voyeuristic detail Mr. Burns provides, this is not a story about an event. There is no middle ground between the sex and sadism, and the allegorical superstructure.

The narrator ambivalently hates and desires her, "even hating her I see her and want her." She is pure sex: "She is simple; she is little more than the beauty of her body." He views her as biology triumphant, wanting only to fulfill her "single egg ovarian hope." He dreams of hurting her to bring some kind of recognition from her: "... by this threat ... I will somehow draw one drop of love ... from her." But he cannot possess her completely, brain and body, and cannot impress himself on her blank mind, so, in frustration, he kills her. Then his life is gone and he waits, impotent, in the rain and mist by the sea.

We also have here, perhaps, man against indifferent nature. The girl represents biological nature, uncaring, and the ocean to which she returns both death and life. The man kills her in a frenzy as a thwarted child would because he is unable to reach her; even though he can enjoy her, he is somehow superfluous. Her body mingles with the ocean and, by fearing to return to the ocean, he removes himself from life.

The most unsatisfactory feature of this story is its obtrusive symbolism. We are continually made aware that Mr. Burns has not only read Freud, but has a sufficient grasp of sex-

Letters To The Tech

Says Secretariat Censors Significant Sign

I have noticed a very obnoxious pair of brown parties added to the graving of "The Entertainer's" poster, whenever the announcement (and, for that matter, the unfortunate lady) had to be cleared by some obscure branch of our glorious Student government. How now, Senators! You should put your notions of prudishness into action around real live figures, first! But I suppose that, immersed in your studies, you have failed to notice them around.

At any rate, we must expect in the near future, that some thoughtful representative of that same all-important Council or Committee will not fail to wrap the shawl of decency around the waist of the dreadfully indecent statues some Greeks put in the art gallery. Maybe, even, ink in a few brassieres on the shocking, dirty pictures displayed there? Mother forbid!

Jean Pierre Frankenhuis '61

Defends City College Ruling On Speaker

To the Editor:

I should like to compliment The Tech on its editorial of Nov. 15 on Academic Freedom. Even though it was not a violation of the Bill of Rights for Hunter College to refuse to

rent its Hall to the National Review and to refuse to let the leader of the Black Muslims speak, it was a violation of Academic Freedom.

The Tech's article must be taken with a grain of salt, though, because it is confused in thinking that the stand of the Administrative Council of the City University that no known member of the Communist Party could be permitted to speak on any of its campuses violated Academic Freedom.

This decision, of course, immediately set off the expected liberal barrage, but the fact remains that Communists are neither loyal Americans (being dedicated to the overthrow of the government) nor intellectually honest (being committed to lying whenever it serves their ends).

Therefore they have nothing to offer to "controlling purpose" of education in New York State: "to maintain and strengthen the American heritage." They have nothing to offer in the search for truth or in the development of values, which should be goals of every educational institution.

The Administrative Council deserves our thanks for their public recognition of the fact that a ban on Communists, who lack intellectual freedom, does not violate the real meaning of Academic Freedom.

Edward J. Dudewicz, '63

Kibitzer

By Elwyn R. Berlekamp '62

The timing in the play of the trump suit spells success or failure for declarer on many a hand. Most hands require that trumps be drawn at once to prevent the opponents from ruffing in later. Many others require the play of the trump suit to be delayed a round or two in order to allow declarer to first set up a side suit or to do some ruffing in dummy. On some rare hands, however, the best strategy is to avoid the trump suit entirely.

Although North's hand is a difficult one to bid in this situation, the course he chose was definitely over-aggressive. After West's opening bid, North found himself without a good call. Overcalls require five card suits, but some players would stretch a point and bid two clubs. A takeout double runs the risk that partner will probably bid hearts and then North has no good reply. Trap passing with such a strong hand runs the definite risk that the auction will close there. However, if East is unable to bid and South unable to reopen it is unlikely that North-South can do better than let West play one diamond anyway.

Therefore I do not agree with North's double, but this first error was minor with what was to come. When the auction got around to him again one level higher, North persisted with a second double and South was obliged to bid two spades. North then abandoned all reason and raised his partner to game, apparently not realizing that South had not promised anything at all.

Fortunately South held a favorable distribution and in spite of his overall weakness there was still hope. The opponents could have ended the contest

NORTH			
♠	10 7 4 3		
♥	A		
♦	K J 9 7		
♣	A K Q J		
WEST		EAST	
♠	A 8	♠	K J 6
♥	K	♥	Q 6 5 4 2
♦	A Q 8 6	♦	10 2
	5 2		
♣	8 7 4 2	♣	6 5 3
SOUTH			
♠	Q 9 5 2		
♥	J 10 9 8 7 3		
♦	4		
♣	10 9		
Bidding:			
West	North	East	South
1♦	Double	1♥	Pass
2♦	Double	Pass	2♣
Pass	4♥	All Pass	
Opening lead: ♣2			

at once by leading spades or diamonds, but West opened a club and South was given a chance to compensate for North's wild bidding.

Dummy won the club ace and led two more rounds, South pitching his singleton diamond. Dummy's heart ace was chased and a cross ruff ensued that left the defenders helpless. Ruffing low could not cause South any trouble, while ruffing high and leading trumps was equally futile. In the end East-West made three trump tricks, but that was all.

It will be noted that declarer can also make this hand by drawing trumps after pitching the diamond on the queen of clubs. This line of play, however, depends upon the fortunate lay of the opposing diamond honors which prevents the defenders from forcing declarer to ruff this suit when they are in the lead with the high trumps.

ual symbolism to drag it in by the heels on all possible occasions. Allegory is probably the most difficult form for a writer to handle and, for some reason, it seems to be a favorite vehicle for aspiring authors.

However the actual writing of "On Hot Point," the phrasing and detail, is occasionally very good and if Mr. Burns learns how to expand ideas as well as he handles words, he can produce some outstanding work.

James Anderson '62

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America is a great country. America's cities are full of houses. America's forests are full of trees. America's rivers are full of water. But it is not houses and trees and water that make America great; it is curiosity—the constant quest to find answers—the endless, restless “Why?” “Why?” “Why?”

Therefore, when I was told that Marlboro was a top seller at colleges from USC to Yale, I was not content merely to accept this gratifying fact, I had to find out why.

I hid myself to campuses in every sector of this mighty land. First, I went to the Ivy League—dressed, of course, in an appropriate costume: a skull-and-bones in one hand, a triangle in the other, a mask-and-wig on my head, a hasty pudding in my chops. “Sir,” I cried, seizing an Ivy Leaguer by the lapels, which is no mean task considering the narrowness of Ivy League lapels, but, I, fortunately, happen to have little tiny hands; in fact, I spent the last war working in a small arms plant where, I am proud to say, I was awarded a Navy “E” for excellence and won many friends—“Sir,” I cried, seizing an Ivy Leaguer by the lapels, “how come Marlboro is your favorite filter cigarette?”



“How come Marlboro is your favorite filter cigarette?”

“I’m glad you asked that question, Shorty,” he replied. “Marlboro is my favorite filter cigarette because it is the filter cigarette with the unfiltered taste.”

“Oh, thank you, sir!” I cried and ran posthaste to several campuses in the Big Ten, wearing, of course, the appropriate costume: a plaid Mackinaw, birling boots, a Kodiak bear and frost-bitten ears.

Spying an apple-cheeked young coed, I tugged my forelock and said, “Excuse me, miss, but how come Marlboro is your favorite filter cigarette?”

“I’m glad you asked that question, Shorty,” she replied. “Marlboro is my favorite filter cigarette because the flavor is flavorful, the flip-top box flips and the soft-pack is soft.”

“Oh, thank you, apple-cheeked young coed,” I cried and bobbed a curtsy and sped as fast as my little fat legs would carry me to several campuses in the Southwest, wearing, of course, the appropriate costume: chaps, canteen, and several oil leases. Spyng a group of undergraduates singing “Strawberry Roan,” I removed my hat and said, “Excuse me, friends, but why is Marlboro your favorite filter cigarette?”

“We are glad you asked that question, Shorty,” they replied. “Marlboro is our favorite filter cigarette because we, native sons and daughters of the wide open spaces, want a cigarette that is frank and forthright and honest. We want, in short, Marlboro.”

“Oh, thank you, all,” I cried and, donning a muu muu, I set sail for Hawaii, because in Hawaii, as in every state where Old Glory flies, Marlboro is the leading seller in flip-top box. On campus, off campus, in all fifty states, wherever people smoke for pleasure in this great land of ours, you will find Marlboro.

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* * *

And you will also find another winner from the makers of Marlboro—the king-size, unfiltered Philip Morris Commander, made by a new process to bring you new mildness. Have a Commander. Welcome aboard.

Satellite Results Given By Kraushaar

By Tom Sheehan '62

Professor William L. Kraushaar delivered the Physics Department's weekly colloquium last Thursday at 4:00 in 26-100. Professor Kraushaar, best known to MIT students as co-author of the freshman physics text “Introduction to Mechanics, Matter, and Waves,” is also engaged in cosmic ray research, under the sponsorship of the Laboratory for Nuclear Science.

He spoke on “Cosmic Rays Detection by Explorer II,” describing the results obtained by a space probe developed by the Space Physics group of the Department of Physics.

He began by reminding the audience of the need for cosmic ray research in supplementing optical and radio astronomy as means for investigating the properties of the universe; he followed this by explaining that proton-antiproton collisions result in neutral pi-mesons, which decay into gamma rays. It is these gammas which are detected by the satellite.

The intensity of gammas detected is simply the product of the source strength with the maximum distance from which gammas enter the detector. The source strength depends on a number of known factors; as a result, a measurement of the intensity can be used to estimate the distance from which the cosmic rays are coming. This distance has been of interest to physicists for many years.

Early experiments measuring the cosmic-ray intensity in space were performed by setting detectors up in large tracts of land on the earth; Professor Kraushaar remarked that in one such test five years ago he had “become involved with poison ivy,” and suffered through a long, cold, winter. As a result of this, it was decided to use a small, handy device for future measurements.

Remarking that it was often easy to be wrong, he displayed a slide of a rocket being fueled, and declared emphatically, “The person in the foreground knee-deep in liquid oxygen is not a graduate student!”

The data telemetered to earth by the space probe requires deciphering by a computer, since the satellite tumbles end-over-end as it elliptically encompasses the earth.

The detector itself consists of a scintillation counter, which, when struck by a gamma, produces a positron and an electron; these are counted by a Cerenkov-radiation detector. A coincident-counter prevents other charged particles from being reported.

The Satellite was launched April 27, 1961, and was operated until December 1. To date only 23 days worth of data have been analyzed by the computer; of this time, useful data was obtained for nine hours looking at space, and ten hours looking at the earth. The remaining time was spent in calibration checks, or in the Van Allen Belt, or out of the range of receiving stations. 22 rays from outer space were detected, and 105 from the earth.

An experimental value of the average intensity was obtained, and from this several conclusions can be drawn; this value permits a calculation of the distance from which cosmic rays come.

The distance calculated turned out to be roughly equal to

the dimensions of our galaxy. The intensity was too great for the rays to be confined to the solar system; assuming the rays come from the entire universe leads to the unlikely conclusion that cosmic-ray density is roughly the same throughout the universe, while light and radio-wave intensity varies greatly in the universe.

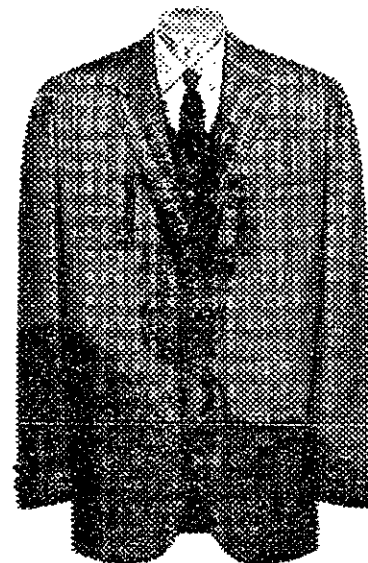
Professor Kraushaar concluded by applying his results to the current controversy between the “Big Bang” and “Steady State” theories of cosmology. While this experiment says nothing about the “Big

Bang” theory, it attacks the basic hypothesis of the “Steady State” theory: protons are continually being created in space.

If this is so, by symmetry antiprotons must also be made; the interaction of these two gives rise to the gamma-rays detected by this satellite. From the observed intensity, the annihilation rate can be predicted; this should equal the production rate. Calculations show the two are off by a factor of 10,000; this would seem to imply that either protons are made at a rate different from that of antiprotons, or else the steady-state theory does not hold.



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British, Austrian Schools:

Summer Courses Offered

Four British and two Austrian summer schools are offering American students the opportunity to combine 1962 vacation travel abroad with six weeks of liberal arts study next July and August. Applications for study at all six summer schools are now being accepted by the Institute of International Education.

Under the British University Summer Schools program, students can apply for study at one of four schools, each concentrating on a particular subject and period. At Stratford-upon-Avon the subject will be Shakespeare and Elizabethan drama; at the University of London the course will be the study of English literature, art

and music of the 20th century; at Oxford the subject will be history, literature and the arts of 17th century England. The theme of the Edinburgh School will be British history, philosophy and literature from 1688 to 1832. Although the courses are designed for graduate students, undergraduates in their last two years at a university will be considered.

The British Summer School fee, including full room, board and tuition is \$254. A few scholarships, covering part or all of the fee, but not travel, are available.

Both Austrian summer schools include in their programs the opportunity to attend performances at Salzburg's famed music festival. The Salzburg Summer School, sponsored by the Austro-American Society, emphasizes German language study, but courses in art and music and on foreign policy are taught in English. Also included, in addition to attendance at the music festival, are a variety of conducted tours of Salz-

burg. The fee for the entire program is \$245. Applicants must be between the ages of 18 and 40 and must have completed at least one year of college work. A few full scholarships are available.

The University of Vienna, offering summer courses at its St. Wolfgang Campus near Salzburg, combines study with outdoor life at a mountain lake. Its aim is to enable English speaking students to become acquainted with Austrian educational and social values. Courses being offered include German language, law and political science, education, arts and history. Students who have completed at least two years of college are eligible to apply. The fee for the full six week program, including registration, tuition, maintenance, tours and excursions, and attendance at the Salzburg Festival is \$335, with an optional four day trip to Vienna costing \$35. A few scholarships covering partial or full fees are available to six week students.

Applications for both the British and Austrian programs may be obtained from the Information and Counseling Division, the Institute of International Education, 800 Second Ave., New York 17, N. Y. British Summer School scholarship applications must be received before March 1, 1962, and admission applications before March 31. Scholarship applications for Austrian schools must be returned by March 1, and admission applications by May 1.

Yale Freshman Math Adapted To Advanced Students At All Levels

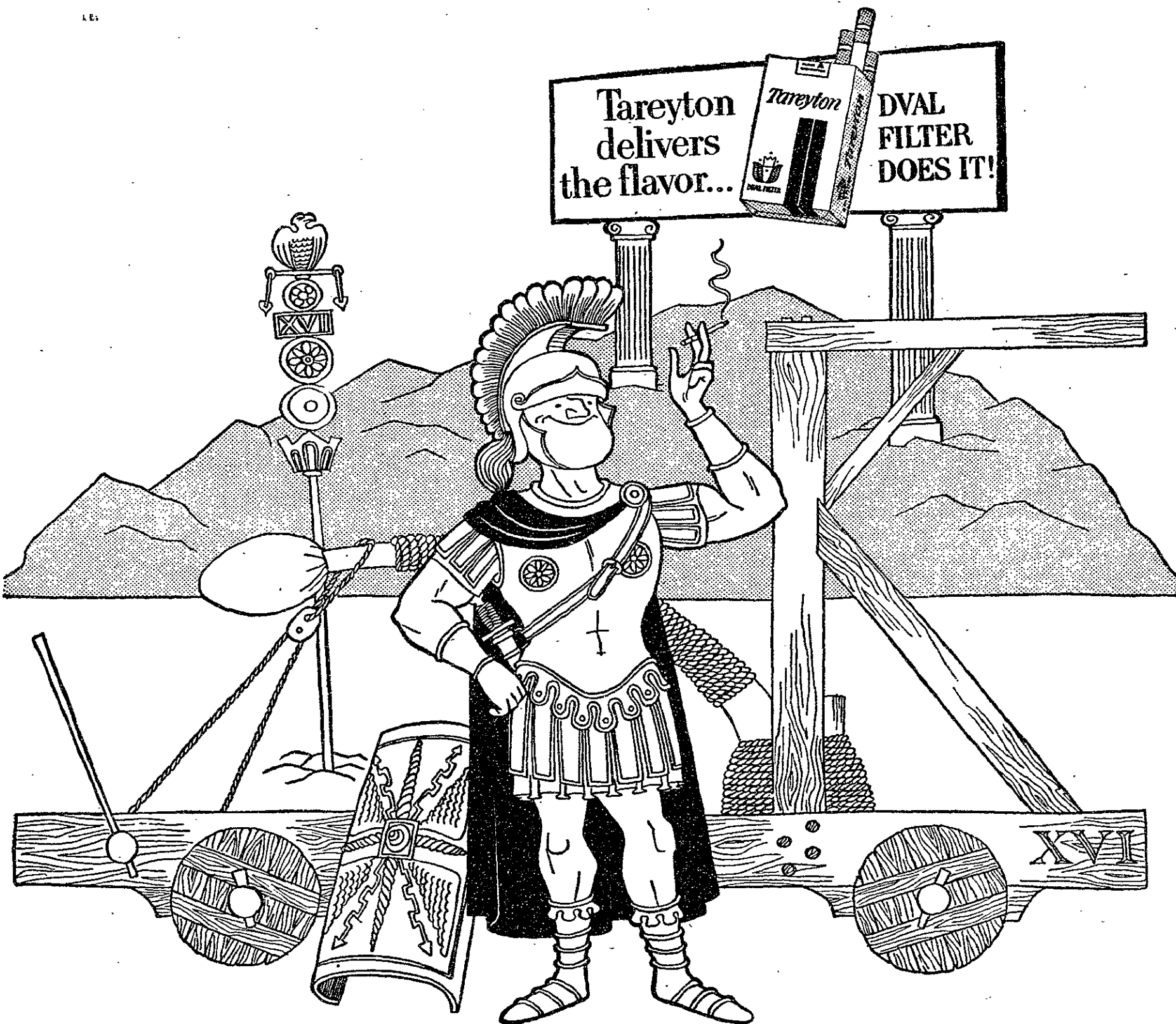
Yale University recently found it necessary to revise its entire freshman mathematics program in response to widespread reforms in the preparatory curricula of the nation's high schools. Because so many freshmen from the better high schools are now entering Yale already equipped with all or part of the analytic geometry and calculus normally taught them the first year, a new system was adopted to provide math for each student at his own level of preparation and interest.

Three Categories

All entering freshmen are now given a mathematics aptitude test which, together with personal interviews, high school records and other math test scores, is used to place them at the proper level within one of three basic categories. For most of them, Yale offers a sequence of three semester courses similar to the regular mathematics series at Tech. Qualified freshmen may begin their math at the second or the third level; this fall 108 students entered the second and 55 students the third course.

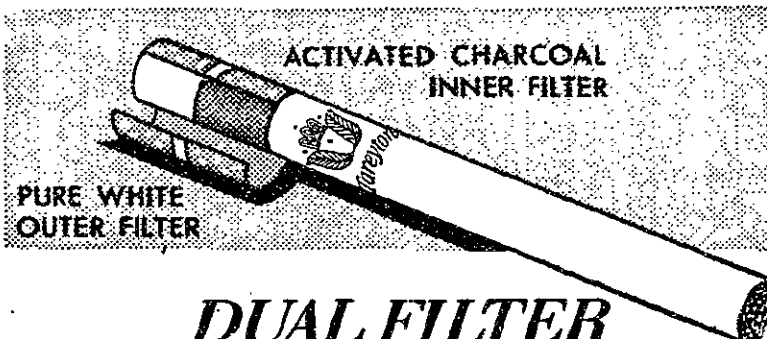
Few Given Complete Freedom

The second category is for those with a strong interest in math and provides an intensive two year course beginning at an advanced level. The last category is reserved for the few exceptionally talented and interested young mathematicians. They are allowed complete freedom to select any of the university's courses in math, even graduate courses if they feel they are qualified.



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Symphony Shows Promise In Saturday Concert

The promise which the MIT orchestra showed at the combined musical clubs concert last October was certainly fulfilled Saturday night. It would be impossible indeed to single out one or a few sections of the orchestra for special praise. With one possible exception, real finesse was attained throughout.

The brass section was the least effective of the evening, while turning in a creditable performance, it did not possess the polish that the remainder

of the group had. This seemed to derive from a lack of confidence and not necessarily from any technical insufficiency.

The orchestra as a whole played subdued passages with thrilling intensity and no resultant loss of accuracy. Chords were well balanced and generally in the sharpest of tune. A professional stage presence was displayed throughout the concert.

The first work, Beethoven's

"Eroica," was of no mean duration. Realizing an overall view of this piece is made difficult by its length. But this problem was not in evidence as the work was performed with a coherency of adequate rigidity without loss of necessary freedom.

The second movement, concerned with the symbolic demise of Napoleon, is worthy of special mention. It escaped from the orchestra, truly like music drifting somberly from a tomb in the deepest pits of blackness. Beethoven's disgust toward his former hero became the revulsion toward death apparent in the music. The orchestra responded well to the challenge of mood.

The opus by Saint-Saens, "Introduction and Rondo Capriccioso," featured Dennis Johnson, who was superb as violin soloist. In his capable hands the piece became mockingly alive. The height which his expression reached was surpassed only by the peak of his demonstrated skill. Throughout this work the orchestra made itself vibrantly felt without becoming overbearing.

In the last piece, Kodaly's "Hary Janos," the orchestra sounded much fuller, an effect partially attributable to the inclusion of a greater number and diversity of instruments. This work was by far the highlight of the evening in terms of impressiveness and entertainment. The final movement, "The Entrance of the Emperor and His Court," was particularly delightful, bringing to mind a vivid scene of pompous royalty.

The evening was highly enjoyable, to say the least. A performance such as this should cause one to pause and wonder just how well the common stereotype of the Tech engineer is true. It was certainly one of those memorable occasions in the musical life of the institute. Congratulations are in order for John Corley, conductor, and for the members of the symphony orchestra.

Richard Olson '63

\$120,000 Computer Donated

(Continued from Page 1)

a room adjacent to the TX-O computer, developed by Lincoln Laboratory. It was the first Lincoln Laboratory computer in which transistors completely supplanted vacuum tubes in logic circuits. It provides a test facility for the evaluation and development of transistor circuitry, and of the largest ferrite core memory ever built. TX-O won nationwide fame last year as the author of TV "westerns."

Jack Dennis, assistant professor of electrical engineering, who is now in charge of the TX-O will also direct the operation of the PDP-1. Professor Dennis explained that the PDP-1 is similar to the TX-O in concept and that it will initially be used for many of the same applications in which the TX-O has proved quite successful. These include speech analysis, the study of bio-electrical signals and the simulation of automata. It is planned to develop a drum storage memory common to both computers.

"While the TX-O is primarily used in research applications, the PDP-1 will be devoted to giving students an opportunity to gain first-hand experience with the principles of construction, operation and application of digital computers. This will also give additional opportunities for undergraduate thesis work.

"The PDP-1 allows easy communication between the user and the problem he is attacking with the computer. One feature that makes this possible is the unusually high speed of the machine for its size and cost. Another is cathode ray tube display which the provision of a typewriter and allows the user convenient interaction with his program."

It is planned to develop a system to allow time-share operation. "Under this arrangement," Professor Dennis said, "several students will be able to run programs independently from separate typewriter consoles. The machine will shift its attention among the programs from one user to another as necessary to carry out the requested computations. The time-shared system will allow greater utilization of the machine's capacity.

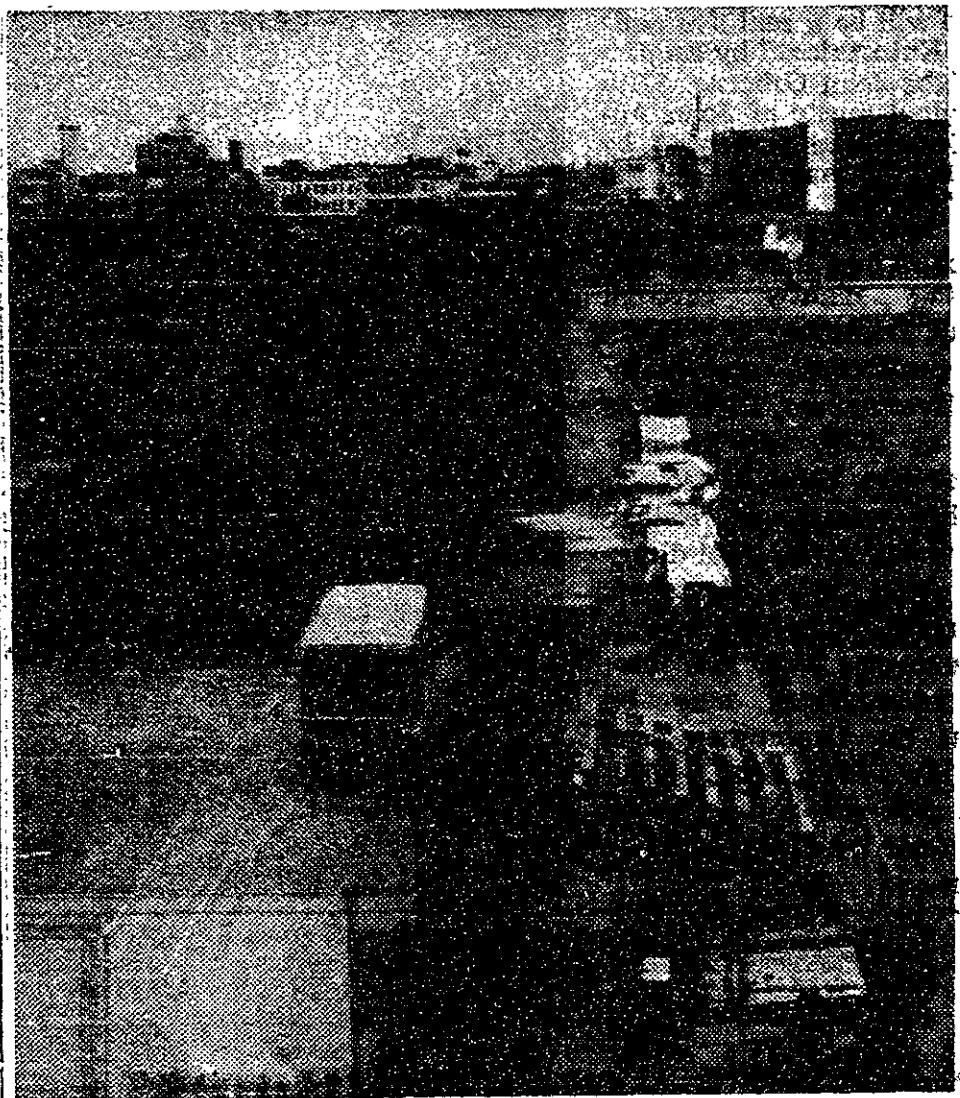
"In addition, this system will allow experiments using the ma-

chine as a teaching aid. There already has been work done on the teaching of subjects such as foreign languages and mathematical formulas by machine. Using the PDP-1 we hope to extend this technique to subjects of greater conceptual difficulty such as symbolic logic and circuit theory."

Presentation of the PDP-1 computer completed a cycle of events in Olsen's life centering around MIT. After graduation he joined the staff of our Digital Computer Laboratory, leading the team which designed and built the "Memory Test Computer" to test the world's first magnetic core memory. He next served as Lincoln Laboratory representative in the SAGE Air Defense Computer design program, conducted jointly by MIT and IBM.

On completion of this assignment, he returned to Lincoln Laboratory to participate in the building of the TX-O computer. He left Lincoln in 1957 to become co-founder of Digital Equipment Corporation. Initially a manufacturer of digital computer circuit modules, the Digital Equipment Corporation now produces digital test systems and the high-speed digital PDP-1 computer. Olsen's contributions to the advancement of his company and the art of digital computing were recognized earlier this year when he was elected "Young Electrical Engineer of the Year for 1960" by Eta Kappa Nu, the national honorary electrical engineering society.

Ditch Still Crawling



— Photo by Richard Long '65
A connection from the Magnet Laboratory to the Charles River is being established to provide cooling water for the magnets.

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Tech Students' Poetry Selected For Anthology In National Competition

Three Tech students will have their poems published this year in the Annual Anthology of College Poetry. "En Rapport," by Floyd Stecker '63; "August August," by Eugene Vorhies Jr. '62; and "Secrets," by Patricia Selby '63, were among those selected by the National Poetry Association from the works entered by students in the association's nationwide annual competition.

The poetry contest was announced Sept. 1 and closed Nov. 5. According to the association, there were thousands of poems submitted and the final selections represent every section of the country.

Live Nude Appears In 'The Entertainer'

There will be a real live nude in "The Entertainer" by English playwright John Osborne. With the original music of John Addison, it will be presented by the MIT Dramashop at the Little Theatre, Kresge Auditorium, opening Wednesday, December 13 at 8:30 p.m., and continuing nightly through Saturday, December 16.

The production, staged by Joseph Everingham, Director of Drama at MIT, will be costumed by Mrs. Helen Bottomly, with choreography by Esther Brooks under the musical direction of John Corley, Assistant Director of Music at MIT.

All seats are \$1.50 and telephone reservations may be made at the Dramashop box-office: UN 4-6900, Ext. 2910. Tickets will also be available at the door on the nights of performance.



Oxford Historian Symes Gives Lecture On Roman Politics

Sir Ronald Syme, scholar of the ancient world and a critic of modern times, is a December lecturer at MIT.

Sir Ronald, Professor of Ancient History at Oxford University, England, yesterday was to speak on "The Myth of Political Salvation," and will speak tomorrow on "Roman Political Thinking Under the Early Empire." The latter lecture, sponsored by the MIT Department of Humanities, will be at 8 p.m. in Kresge Auditorium and will be open to the public.

Sir Ronald's studies, wide travel and experience in the British Foreign Service contribute to his standing as a commentator on early and present societies.

Since 1949 Sir Ronald has been Camden Professor of Ancient History at Oxford and resident of Brasenose College.

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Entertainment-wise

Rand Talks On Big Business

Ayn Rand, one of America's most discussed novelists and philosophers, was born in Russia and educated at the University of Leningrad. She came to this country in 1931 to speak in the Ford Hall Forum Lecture Series at Jordan Hall this coming Sunday, Dec. 17, at 8:00 p.m.; her subject is "America's Persecuted Minority: Big Business." She is best known for the bestsellers "The Fountainhead" and "Atlas Shrugged."

The MIT Chapel is sponsoring an organ recital, also this next Sunday, Dec. 17, at 4:00 in the afternoon. Admission is free.

Menotti's three-act tragic opera, "The Consul," which concerns an underground leader and his family in a European country under dictatorship, will be presented Wednesday, Dec. 13, 8:30 p.m. in the Boston University Concert Hall, 855 Commonwealth Avenue. The performance is open to the public without charge.

The MIT Community Players, a group made up of Institute faculty and relatives, will perform "The Interlude, A Midsummer Night's Dream," directed by Marie Phillips, for the Christmas meeting, Thursday,

Dec. 21, at 8:00 p.m. Cocktails are at 5:30 followed by dinner at the MIT Faculty Club.

Jim Peck, whose **Freedom Ride** in Birmingham, Alabama, last May resulted in his being unmercifully beaten up by a gang of pro-segregationists, will be beaten up again by an enraged audience at the Conservatory Auditorium, 31 Hemenway Street, next Sunday at 10:30 a.m. when he attempts to speak on "The White Man in the Non-Violent Struggle for Racial Equality". The funeral service, immediately following will be conducted by Rev. Donald G. Lothrop, while Ruth Hamilton, mezzo-soprano, will sing the eulogy, accompanied by Hiram Q. Wiggle at the organ.

To add to your already crowded Sunday schedule, there is also the oboe, violin, harpsichord trio at the Gardner Museum at 3 that afternoon. It is free.

Warren Wiscombe '64

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NOTICE

In recognition of the lateness of the Christmas mails and the vacation period, as a service to our members, December 1st bills, usually due by the end of the month, will be eligible for Patronage Refund if paid on or before January 10th, 1962.

**THE
COOP**

The Bookworm

By Tom Maugh '65

Little Me, by Patrick Dennis, is the current rising star in the world of fiction. The fictional memoirs of the great actress, Belle Poitrine—star of such movies as "The Decline and Fall of the Roman Empire," "Plutarch's Wives," "Paradise Lost," and "The Scarlet Letter" (about a college football player, of course) the book is a riotous parody of the current "as-told-to" fad in biographies.

The story chronicles her rise from a destitute child in Venezuela, Illinois—where her mother's "place of employment was one of the most beautiful establishments in Venezuela. Momma had accepted a position with Madam Louise, who had open a sort of gentleman's hotel and social club near the

LITTLE ME, by Patrick Dennis. 272 Pages. Lancelot Leopard, Limited, \$5.95.

depot," where traveling salesmen and many local townsmen would "drop in for a glass of wine, a bit of music and some stimulating conversation. In order to keep her establishment going, Madam Louise employed Momma and three or four of the better conversationalists among the ladies of Drifter's Row"—to her eventual retirement on her farm at Cyclops, Connecticut, where "on Sundays and on summer weekends the road between Cyclops and Salisbury is clogged with cars and 'rubber-neck' buses filled with sightseers who just can't 'believe' Belledame Farm."

Belle had a long and varied career, which included such things as work in a burlesque show, a term in the women's detention home, a short reign as the social queen of London, a period as a great Hollywood actress, a short stint on television, a bout with alcoholism, a charge of contributing to the delinquency of a minor, and her final retirement after "I find God in Southampton."

Mr. Dennis has created a very clever, cunning woman, hidden behind the guise of a naive, innocent young girl ("The accompanying article stated that 'Cedie's' father, 'the ninth Earl of Baughdie, and third richest man in the British Empire,' had passed quietly away, leaving

his enormous holdings to Cedric Roulstone-Farjeon, his only son.' I realized then and there that I must marry dear 'Cedie,' if only to be of some solace to him as companion and helpmate when he, poor, shy boy, took on the staggering burdens that went with the earldom").

He even goes so far as to state Belle's philosophy of life, in such rules of conduct as: "Be a ruthless critic. Not of others, but with yourself. Always ask 'Where have I failed?' and answer with brutal honesty. I realize now that, when certain of my films were not 'boffo,' the fault lay not with others, but with little me. They were oftentimes ten or fifteen years 'ahead of themselves,' too intellectual for both public and critics. In refusing to lower my standards, the blame was exclusively mine."

The book is filled with unusual characters, such as Carstairs Bagley ("Many people have made cruel fun of Carstairs Bagley simply because he felt more comfortable in women's clothing during his off hours. I, for one, see nothing amusing and unusual about that. I—and millions of other women—relax in slacks), cigar-smoking "Billie" Divine (the girl agent), Helen Highwater, Letch Feeley, and Mae Retch.

Moreover, the book is added to by over 150 pictures, illustrating the text. Ably shot by Chris Alexander, and posed by professional actors and actresses, the pictures along are worth the price of the book, as they are hilariously funny.

Unless you are an avid hater of humor, **Little Me** should be on your booklist, for it is one of the most facetious books to



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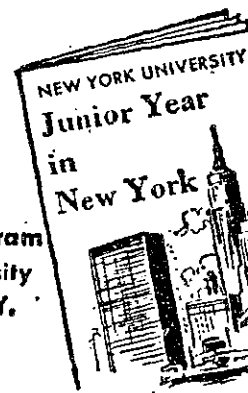
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SONGS! DANCES! GIRLS! SONGS!

movies . . .

Audrey Hepburn Splendid In "Tiffany's"

"Breakfast At Tiffany's" is undoubtedly the most delightful movie to emerge from Hollywood in recent years. Its long engagement at the Capri Theater in Copley Square will end in about twelve days, and, if any of you have not already seen it, I can only urge you in the strongest terms to do so. Unless I am sorely mistaken, this picture is in line for a number of Academy Award nominations.

This motion picture has all the romantic and heart-warming aura which surrounded "Gigi," and yet it also finds room for a good sprinkling of comedy, much of which is supplied by Mickey Rooney as a rather harebrained Japanese photographer. Audrey Hepburn turned in a performance which was, in a word, tremendous. As the young girl who was discovered by a Hollywood promoter on a Midwestern farm and subsequently transformed from a yokel to a sophisticated member of New York's upper crust, Miss Hepburn, as Holly Golightly mastered a challenging role in a touching and believable way, for which I predict she will receive the Best Actress Award.

Holly Golightly's pastime was making money from men—she was a gold-digger. When she asked for some change to go to the powder-room, the usual reply was a \$50 bill. Her aim was professedly to accumulate enough money to buy a ranch in Mexico, with horses, for her and her brother, but at heart she is really trying to find herself, to find what she wants from life. Apparently it is not wealthy men—she refers to them as either 'rats' or 'super-rats'.

George Peppard, as Paul, seems to supply the answer to her search, though one is not entirely sure of this at any time during the picture. He had begun his career as a writer, but had slipped into the more easy life of a male prostitute whose benefactress had set him up in an apartment immediately above Holly's. They meet one night when Holly crawls out a window and up the fire escape to get away from one of her 'rats.' Being in somewhat the same line of work, they strike up an immediate friendship. Only gradually does it turn to love, as Paul begins to realize that Holly needs his help.

A relative newcomer to the screen, Mr. Peppard did well in his first big picture, though admittedly Miss Hepburn stole the show. He has considerably more talent than Gary Cooper or Jimmy Stewart did when they first started, and the field is open for him to move up to fill the paces of the vanishing old-guard stars like Clark Gable. We will be hearing more of him, no doubt.

As a whole, "Breakfast At Tiffany's" is more than a love story, and more than a sophisticated comedy; it is a great movie. Do not miss it.

Warren Wiscombe '63

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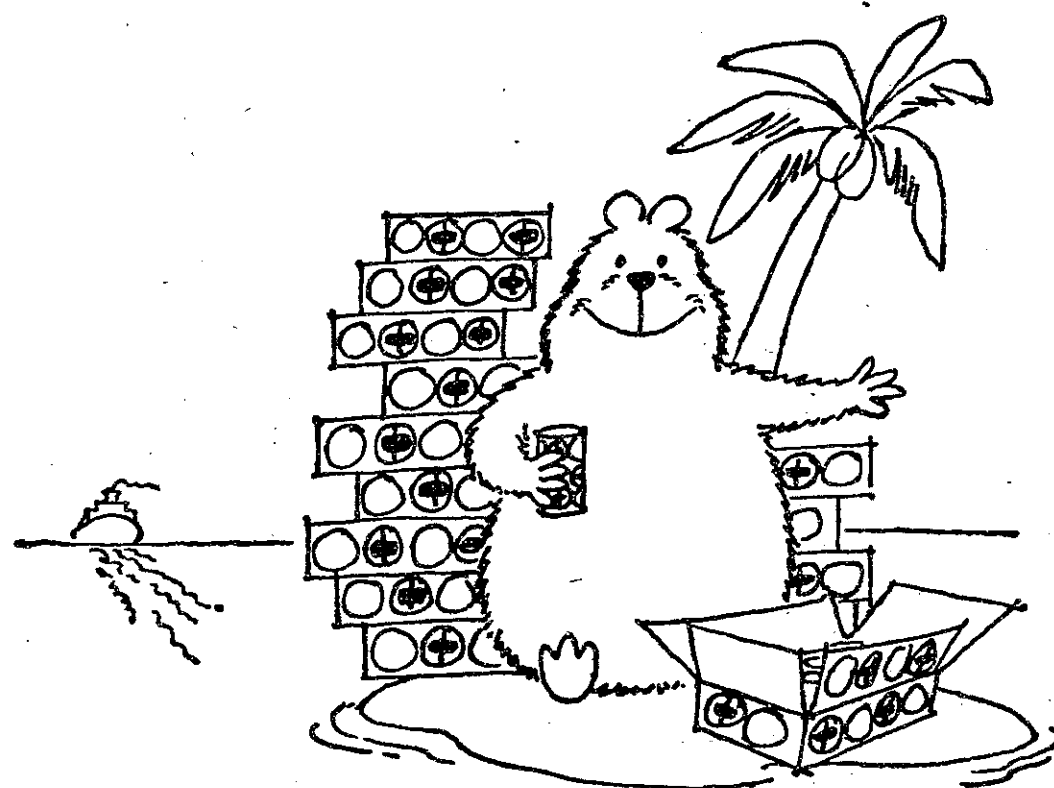
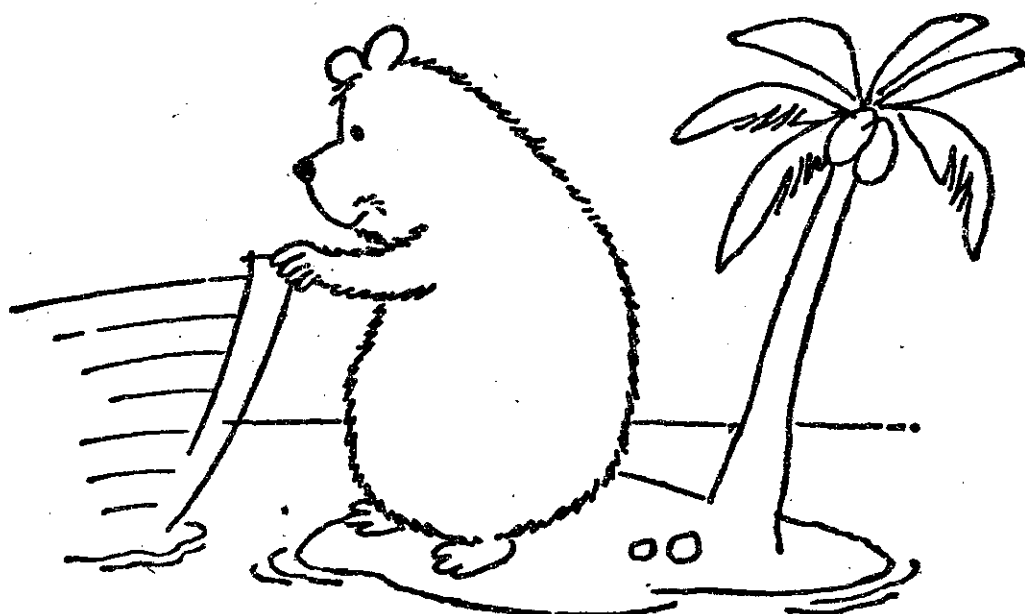
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College World

Economist Suggests Universities Pay Students For Attending Class

"Tuition Going Up!" This has been a headline in many a school newspaper within the last year as more and more colleges declare that their students are not paying enough of a share of the cost of their education.

Professor H. W. Schultz, a University of Chicago economist, in a speech last month before the American Association of Land Grant Colleges and State Universities (of which MIT is a member) took a new approach to the problem of the cost of a college education. He said that colleges should pay students for attending classes.

Colleges and universities, Prof. Schultz stated, seriously underestimate the value of the time students spend at college. How else, he asked, can one explain the wastage of students' time?

Prof. Schultz supported his argument with statistics. In 1956, he noted, the total cost of higher education in the United States was \$3.5 billion, but college students had to forego total earnings of \$5.8 billion in that year; yet colleges go on treating the time of students as if it were a free resource.

The answer to not economizing on the time of the students, Prof. Schultz predicts, will be to pay each student for the earnings he loses by attending college. He claims that, impractical as the procedure may

seem, it would result in basic reforms in the uses of school facilities and faculty time and in school curricula.

"Talkathon" Invades Michigan

What can you do with a phone booth? A few years ago the obvious answer would be to stuff students into it. Well, people found out that you just can't fit 187 students into a 3x3x8' phone booth. So they decided that perhaps the next best thing just might be to talk on the machine. The University of Illinois was among the first to start the "talkathon." Its record was established at 120 continuous hours of conversation.

The fad has swung into Michigan with talkathons now in action at Western Michigan, Michigan State and University

of Michigan. As of noon last Wednesday, the hour totals were: Western Michigan, 180; Michigan State 133; and U. of Michigan 95½. All three were still talking.

What Is This—A Joke?

The Michigan Daily (U. of Mich.) gave further details on the talkathon on its campus. Its talkathon is unique, claims The Daily, in that it was not organized in advance. The call was made only 10 minutes after word was received of the MSU talkathon. The conversation between West Quadrangle men's dorm and Mary Markley women's dorm was almost over before it began as the coed answering the Markley phone almost hung up thinking the whole thing was a joke. But since then dozens of talkers at each dorm have expressed themselves on hundreds of subjects ranging from hometowns and academic majors to disarmingly frank self-revelations protected by the anonymity imposed by the telephone wire. The enterprising men of West Quad have hooked a loudspeaker into the phone circuit so that the whole dorm can listen in on the conversations. Many blind dates are said to have resulted. The only problem plaguing Michigan in its attempt to catch up with Michigan State is that final exams began this Monday and it was not known whether the talkers could surmount this barrier.

So far as *The Tech* can determine, the talkathon is still awaiting some leading New England college to introduce the fad into this area.

WHBS—Not WTBS

While Michigan students were getting blind dates, one University of Texas coed was getting a blind wedding. She never did find out who she married, but there was an asterisk before her name in the student directory. This means that the administration considers her unequivocally married.

Perhaps she should take advantage of a service of WHBS, the radio station of the Harvard Business School. WHBS (820 kc) offers, each Tuesday night from 10 to 11, a program called "The Bedtime Hour," and featuring in particular — "Advice to the Lovelorn," emceed by (who else?) Radcliffe girls. To get answers to your questions just call UN 4-9746 between 10 and 11 on Tuesdays, or, if you wish, drop in and visit. The studios are in the basement of Glass Hall.

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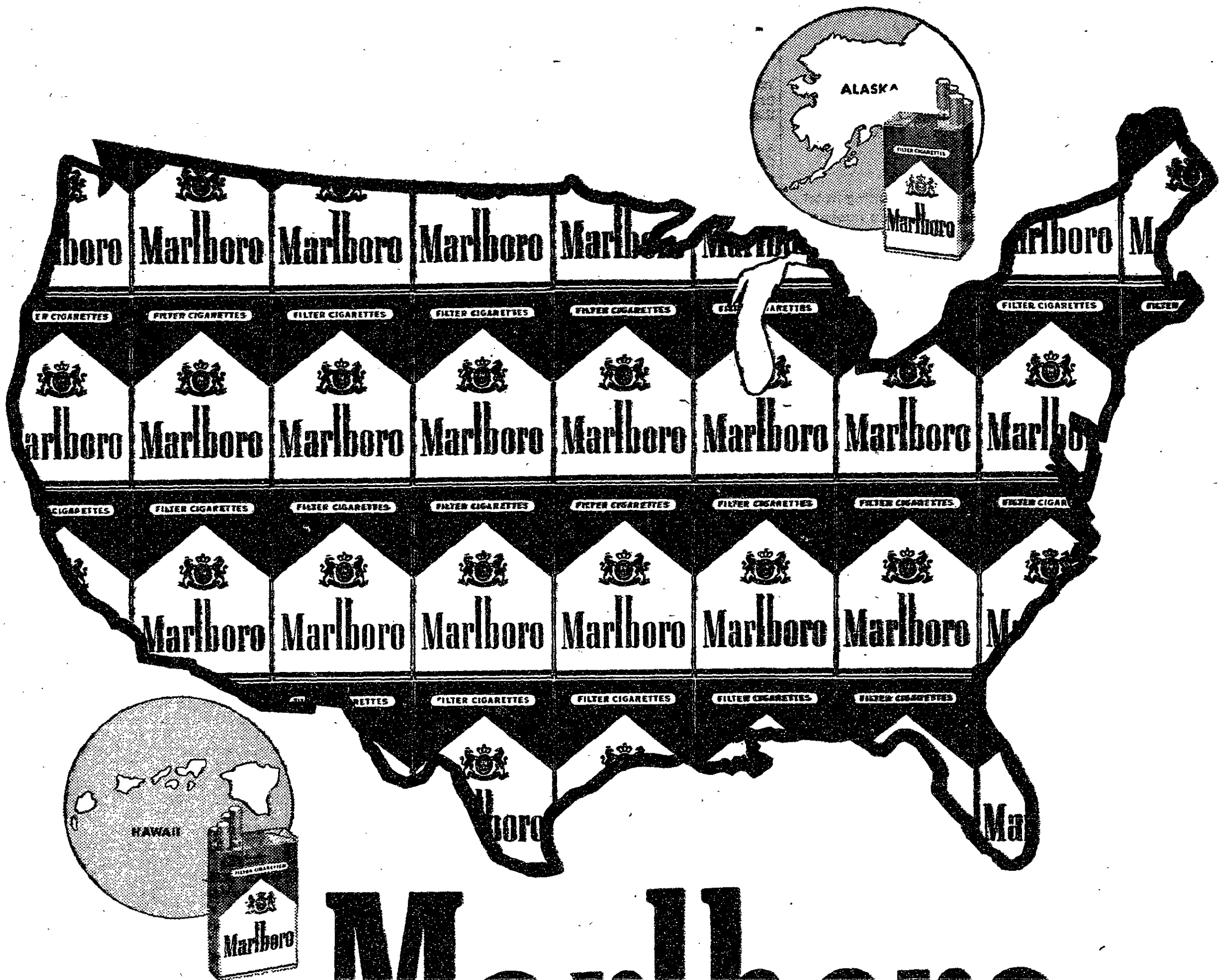
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Looking Back...

75 Years Ago

The recent communication concerning the adoption of class colors has The Tech's most hearty support. Class colors are greatly desired at the Institute, and the lack of them is sorely felt, especially on such occasions as the recent Sophomore-Freshman football game. It is unfortunate that we are open to the charge of copying Harvard.

Mr. Blodgett, of the Boston and Albany Railroad, is lecturing the Senior Civils and Electricals on electric railway signals.

The Biologicals made a trip to Beverly Bridge with Dr. Gardiner on the 11th, and were initiated into the mysteries of gum boots and the art of capturing crabs, polyps, starfish, etc. Such occasions as this are decidedly more interesting than peering through a microscope all afternoon.

The University of Mississippi has petitioned for the removal of twenty young lady students attending that institution.

The Vassar girls are said to be so modest that they will not

look at a clothes-line when the clothes are off.

The Amherst Student, although not containing much reading matter, is well edited. We would suggest a little more attention to typographical correction. Its college news is by no means fresh.

The number of men who graduate from the Institute has always been small compared with the number who enter each year. This discrepancy is much greater than is usual in other colleges, and the causes which produce it should be analyzed, with a view toward remedying them, if possible.

50 Years Ago

At 1:30 p.m. yesterday the Wireless Society held a meeting in its room in the corner of the electrical laboratory. The principal object of the meeting was to announce that Dr. Pender had secured for the society a transformer, manufactured by the Ritchie Company. The cost, somewhere in the neighborhood of fifteen dollars, will be borne by a benevolent and modest individual who prefers to remain anonymous.

At a meeting of the Swimming Team, it was decided that further continuance of the new sport was inexpedient on account of the noticeable lack of support and interest.

Tomorrow noon there will be held a mass meeting in Huntington Hall in the interest of the hockey team. The next day, Thursday, the team is to play Harvard in the Arena, and hopes to defeat them. They are in fine shape and if they get the support of the students there will be no doubt of the result. The mass meeting tomorrow is for the purpose of explaining to the student body the benefits to the team and the Athletic Association that a crowd at the Arena will bring.

Supported by four hundred loyal rooters, the hockey team obtained revenge for the defeat of last year by winning an exceptionally clean game from Harvard at the Arena last night by the score of four to one.

Fire fighting in the city of Boston will be reduced to an accurate science, and the danger from fire in the big wholesale and retail districts will drop to a minimum when the new high pressure salt water mains are laid in the city streets and put in operation.

25 Years Ago

Attempts by Voo Doo to publish a hoax issue of The Tech failed to materialize last night, for lack of copy, according to evidence discovered early this morning.

The stunt started, but lack of a staff killed the efforts. Philip H. Peters, '37, general manager of Voo Doo, when asked if he had anything to say, exclaimed, "Why, of course not." Peters was at home while Francis S. Stein, '38, editor, made a futile attempt to write the issue.

Shortly after midnight, a Tech reporter saw the fake at the job printer, dated November 24. The featured story was "Poster Hoax Bared," an imaginary revelation of some illegal posters.

Makeup sheets indicated that the issue was to be the same size as The Tech. It was patterned after the fake of two years ago perpetrated by John Duff, III, '35, former general manager of Voo Doo. However, it lacked much of the originality of that stunt.

Stein and Peters, after much telephoning for help in writing, gave up the issue as a bad job, poorly tried. An estimate of the type set indicated that at least \$100 had been wasted.

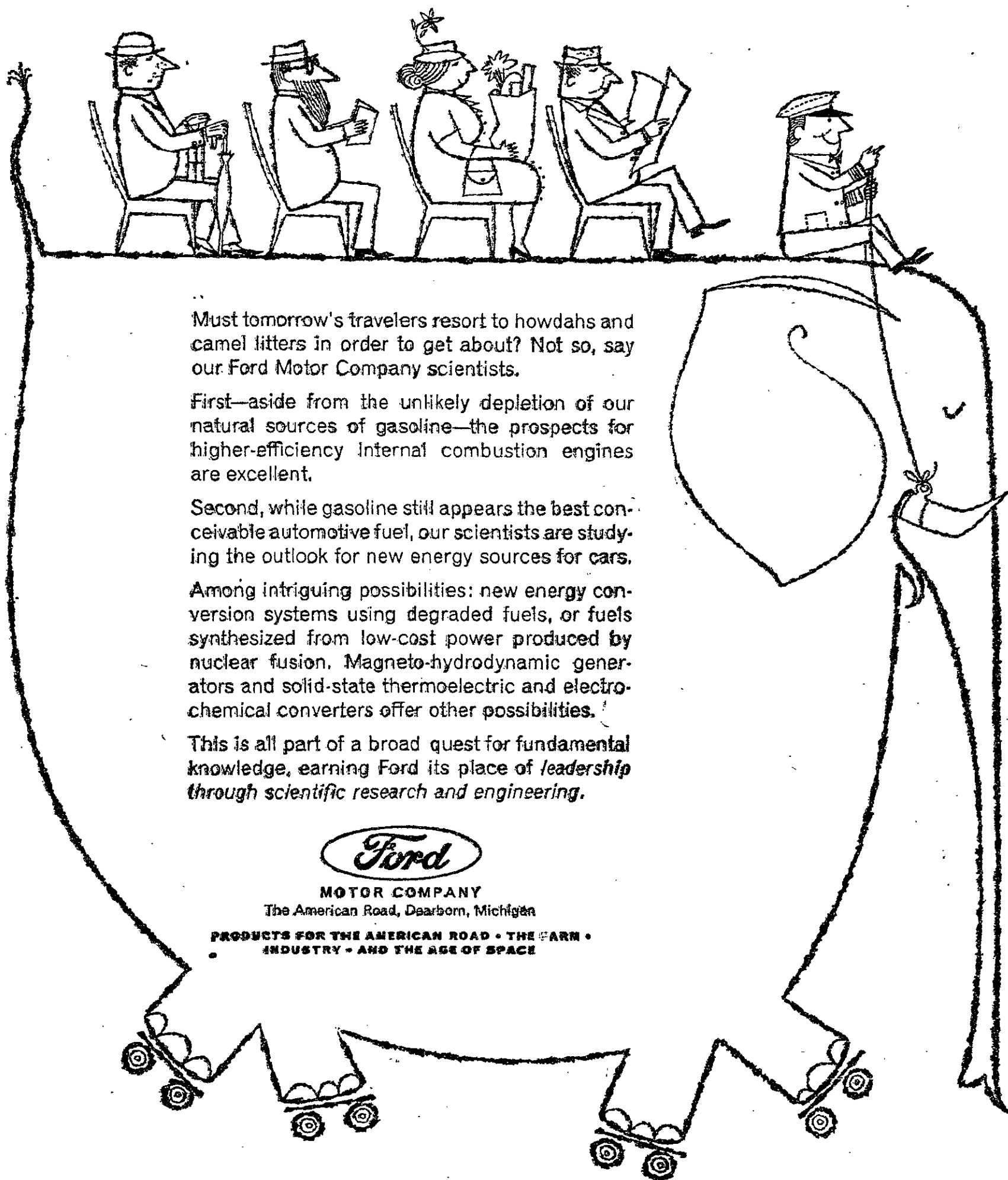
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THE COOP

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GMC Upsets ATO, Forcing Three-Way Tie In Basketball

As the intramural basketball season swings into its final week of play, the championship remains as elusive as in the beginning of the season. A major factor is the possibility of a three way tie for first

place in the American League. Graduate Management Society's 54-35 victory over the Alpha Tau Omega A team leaves ATO A, Grad. Management,

and Burton A with identical records; barring an upset, this means a playoff for positions in the finals.

The National League is equally undecided; Graduate House A looks like the league champion, but the Gross Nationals, The Old Guys, and Theta Chi A may tie for second place. This is largely due to Gross Nationals' 53-41 defeat of The Old Guys.

Baker B has clinched first place in the American Association while Student House has clinched second. In the International League Baker House A has clinched first place, and in the Pacific Coast League Electronic Systems Lab. defeated Alpha Epsilon Pi A to win the title.

Hayden 1 should win the Eastern League, Theta Delta Chi has clinched first in the Southern League, while in the Western League, Burton Dining Staff, Graduate "C," and the Chinese Student Club are tied for first place.

Riflers Easily Outshoot Bowdoin, 1402-1323; Ludeman, Smith Highest

Outstanding scores by Captain Steve Smith '62 and Richard Ludeman '63 led the MIT Rifle Team to an easy victory over Bowdoin in Saturday's match. There was little to back up their performance, however, as MIT's final score was a disappointing 1402. This was still more than enough to defeat the outclassed Bowdoin shooters who posted a 1323.

The MIT high five were Smith, 288; Ludeman, 287; Joe Wyatt '63, 280; Pete Hoffman '62, 274; and Al Gleim '63, 273.

It is apparent by this date that no single team will dominate the New England League this year. The championship is up for grabs with several schools shooting sporadically in the low 1400's.

Other campus shooting activity included the shooting of the Hearst Postal Match by the MIT Army ROTC Rifle Team last Friday. The team composed of Ludeman, Gleim, Joe Boling '64, Terry Foster '63 and Jerry Skinner '63 fired a 933 out of a possible 1,000. Judging from previous years' scores, this should place the team among the top three in the First Army Area.

Baker A Boosts Bowling Margin

At the halfway mark in Intramural Tenpin Bowling, Baker House A continues its dominance over the field with a lead representing 400 pins. The top three also have significant leads over the rest of the first fifteen, who are closely packed.

The spread from third to fourth equals the spread from fourth to fifteenth. This is indicative of a close race for the All-Sports-Trophy points available to those placing in one of the top few positions. Relative positions of the teams remained unchanged from last week.

IM BOWLING STANDARDS

1. Baker A	132.26
2. Burton II	124.50
3. Senior House A	123.24
4. Phi Kappa Theta I	117.94
5. Sigma Alpha Epsilon A	116.82
6. Kappa Sigma	115.56
7. Burton I	115.34
8. Pi Lambda Phi	115.26
9. Sigma Phi Epsilon A	114.94
10. Club Latino	113.84
11. Burton III	113.58
12. Lambda Chi Alpha	113.36
13. East Campus II	113.30
14. Grad House Dining Staff	112.22
15. Sigma Chi	111.60

To Enter Feb. Meet

Skiers Seek EISA Place

By Howard Ellis '65

With six lettermen returning, MIT's Ski Team enters the new campaign with a great deal of valuable experience. For the past three years, the squad has swept its league—and last year the Engineers went undefeated. Thus, Coach Bill Hayes can rightfully expect much from his boys in the coming season.

The big meet of the year will be February 9-10 at Sugarloaf Mountain in Maine. If the team comes out on top over the other

fifteen entries, it will be asked to join the Eastern Intercollegiate Ski Association—the major league of intercollegiate skiing. The top five teams of this big league are invited each year to the NCAA Championships at Squaw Valley. Undoubtedly there are a lot of ifs, but team captain Bob Peccei '62 thinks the squad may have just enough to go all the way.

Tech's Ski Team is indeed a cosmopolitan group. Of the first eight men, only one is an American. Four are Norwegians, two are Italians, and one is a New Zealander. The six returning lettermen are: Bob Peccei, Pete Goldstern '62, George Emo '62, Hendrik Wessell '64, Ben Aasnaes '63, and Mary Stieletz '64. The other two men filling out the starting squad are seniors Christian Haslum and Bjorne Ovale.

Coach Bill Hayes is quite a skier in his own right. During his college years he skied for the University of New Hampshire. Later on he was a ski instructor at Sun Valley.

IM Swimming Meet Rosters Due Today

The annual Intramural Swimming Meet will be held this Saturday, December 16, beginning at 2:00. Trials will be held tomorrow and Friday, starting at 6:30. A trophy will be given to the winning team.

The order of events in the final meet will be: 200 yard medley relay (back, breast, butterfly, free); 50 yard freestyle; Diving (any five dives); 100 yard freestyle; 50 yard backstroke; 50 yard breaststroke; 50 yard butterfly; 200 yard freestyle relay (four men).

Trials for the medley relay, 50 free, and 50 back will be on Thursday; 100 free, 50 breast, 50 butterfly, and freestyle relay trials will be on Friday. Diving trials will precede the tournament on Saturday, at 1:00.

Each swimmer will be limited to two events in both the trials and the finals. Final rosters are due today (December 13) by 5:00 at the Athletic Association office in the du Pont center.

Grad, TDC Best In Hockey

After a week and a half of play in Intramural Hockey, Graduate House and Theta Delta Chi A lead the two major leagues; these two perennial powers will probably meet in the playoff finals for the championship.

In the minor leagues, Sigma Chi and Delta Psi are expected to dominate leagues III and IV, respectively; league V appears to be a toss-up, with Burton House holding a slight edge.

In league I, traditionally

Cindermen Start With Loss To BC

Boston College took the MIT Varsity indoor track team by a score of 84.3-37.7, and the Freshmen by the narrow margin of 57.5-55.5. Good performances were shown by many of the Engineers. Tonight both Varsity and Frosh run at Harvard, beginning at 6:45.

Tom Goddard, '63, took second in the mile run with a good time of 4:37, and followed this by setting a new Rockwell Cage record of 10:07.1 in the two-mile, only two hours later. Jim Flink, '64, was the top scorer for the MIT varsity, copping 15 points with firsts in the 50-yard dash and the 45-yard high and low hurdles.

Co-captain Steve Banks, '62, made a good showing in the 1000-yard run, with a time of 2:30. In addition, in the 350-yard run, Andy Roskos, '64, of MIT, took first in 44.5.

The final score is not representative of the effort expended by the MIT runners; this meet marked the largest number of men competing for Tech in a single meet in many years.

In the Freshman meet, Roger Butler won the 1000-yard run in 2:34.2; Mike Oliver and John Golden finished second and third, respectively, in this event. Oliver and Golden also ran two-thirds in the mile run. The three freshman hurdlers swept both the 45-yard high and low hurdles, gaining 18 points. In the jumping events, Dave Carrier took a second in the broad jump with an exceptional jump of 20'-6"; Carrier also tied for first in the high jump with a 5'-8" jump. In the pole vault, Mike Keehner took second place for the freshmen.

The Tech Freshmen made an excellent showing against a strong Boston College team, and Coach Farnham has high hopes that they will have a good indoor season this year. After tonight's conflict with Harvard, the cindermen will travel to Northeastern on Saturday.

Frosh Fencers Lose

The MIT freshman fencing team duelled the Harvard frosh Saturday as the Crimson came from behind by winning two of the last three matches to take the meet, 14-13. The foil team of the Tech squad was outstanding.

Tonight, the varsity goes into action at Harvard. This is the second match for the varsity, who routed Bradford Durfee, 18-9, in the opener.

In Amateur Fencing League of America women's novice competition last week, "Scotty" MacVicar, '64, and Sue Colodny, '64, Tech coeds, were among the 19 girls who fenced. Sue took the silver medal.

strong Theta Chi and Phi Gamma Delta had no trouble trouncing their opponents in their opening action; but neither should give the Graduate powerhouse much trouble.

League II appears to have a sizable quality spread, as Theta Delta Chi A tromped Sigma Phi Epsilon, who in turn drubbed NRSA.

Delta Psi and Delta Upsilon have entered teams for the first time this year, and Theta Delta Chi has become the first living group ever to enter a B team in IM Hockey. Of these three newcomers, Delta Psi appears certain of a berth in the playoffs.

Playoffs will be held in February, and All-Sports Trophy points will be determined on the basis of these results.

IM Hockey Results	
League I	
Grad House 6, Senior House 2	
Theta Chi 5, Senior House 0	
Phi Gamma Delta 4, Phi Mu Delta 0	
League II	
Sigma Alpha Epsilon 5, Sigma Nu 0	
Theta Delta Chi 4, 6	
League III	
Sigma Phi Epsilon 3, NRSA 0	
League IV	
Baker House 5, Delta Upsilon 0	
Sigma Chi 10, Pi Lambda Phi 1	
Sigma Chi 5, Baker House 2	
League V	
East Campus 1, Alpha Epsilon Pi 0	
Delta Psi 5, Alpha Epsilon Pi 0	
Lambda Chi Alpha 3, Theta Delta Chi 1	
League VI	
Kappa Sigma 1, Burton House 1	
Burton House 4, Tau Epsilon Phi 2	
Tau Epsilon Phi 2, Kappa Sigma 1	
Tau Epsilon Phi 4, Phi Kappa Theta 0	

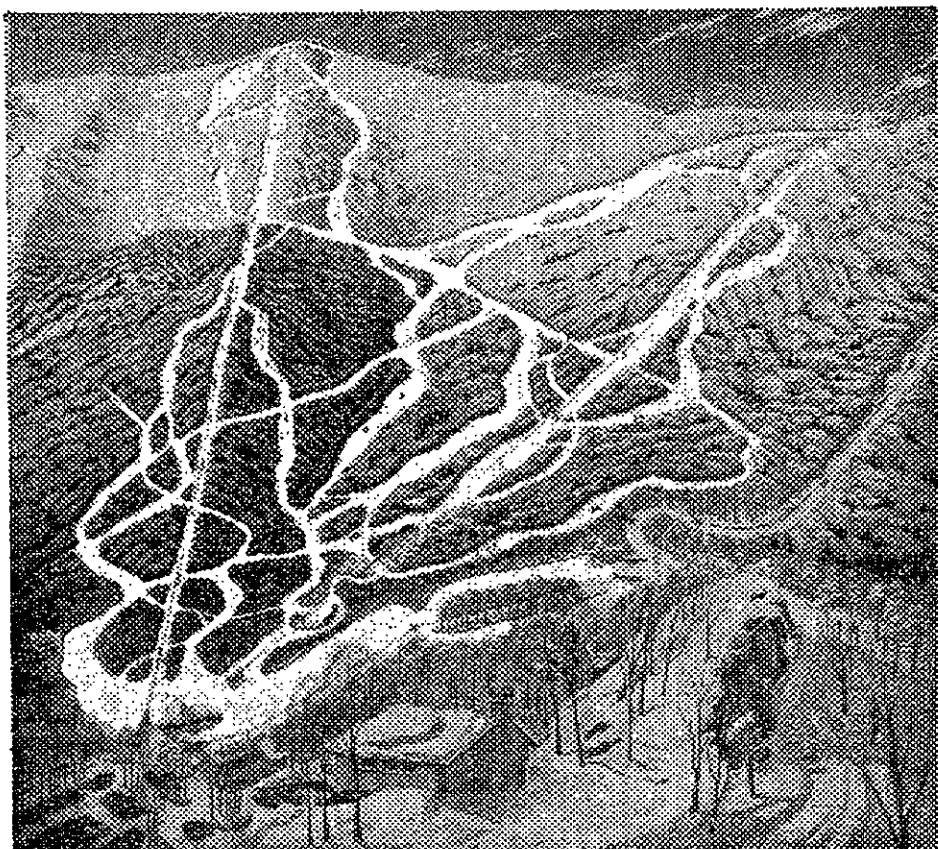
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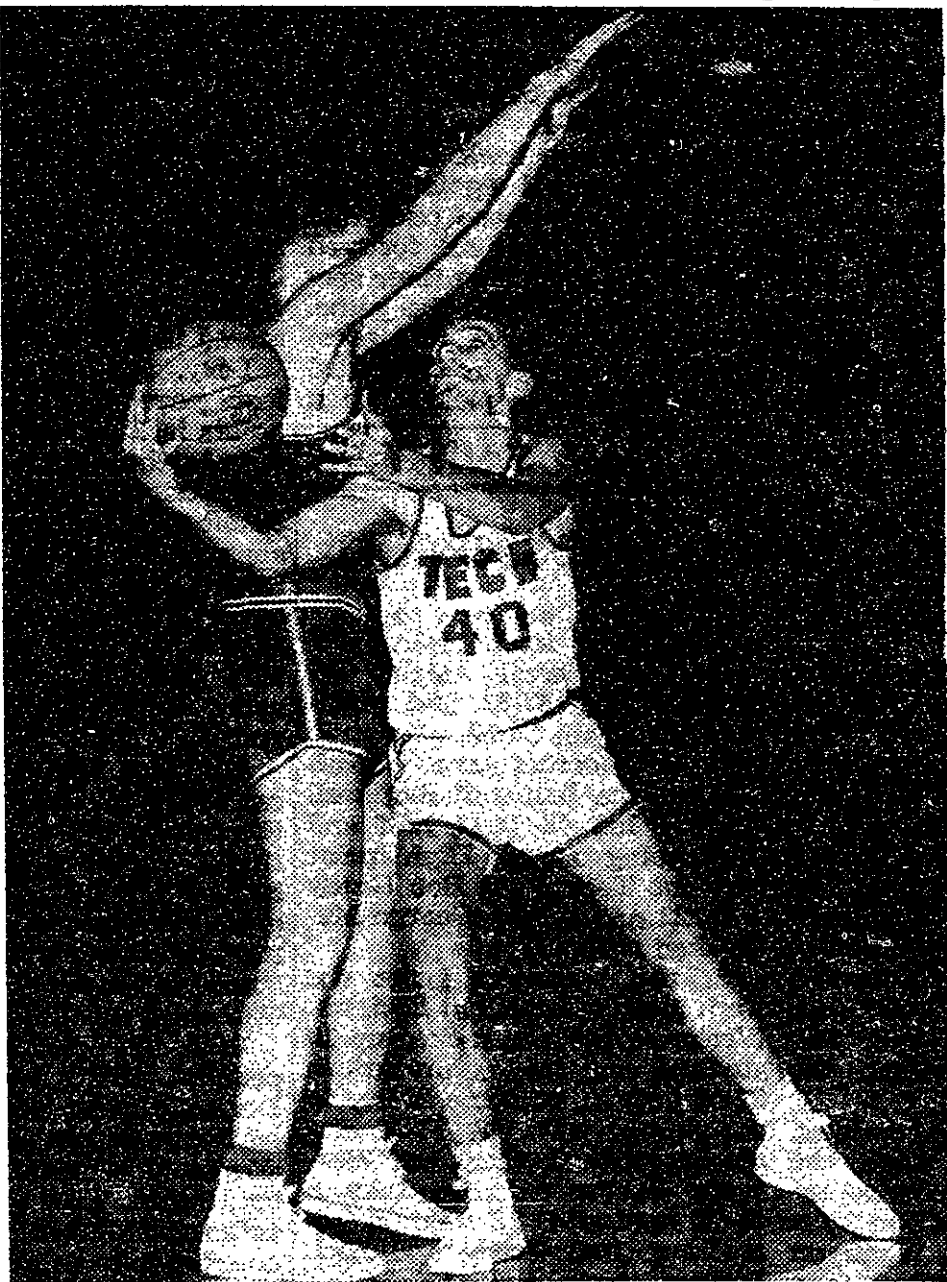
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MAD RIVER GLEN
Ski Area
WAITSFIELD • VERMONT



Center Tom Burns '62 cuts around Winthrop Davenport in a move that netted two points for the Engineers.

Fencing is a sport with its historical antecedents shrouded by the mists of time. The first formalized systems of swordplay were instituted among the Roman gladiators and it finally developed into an art in the Renaissance with the Italians and French becoming the outstanding masters.

Modern intercollegiate fencing involves three weapons: the foil, the epee, and the sabre. The foil is a light weapon with a small cup guard and had its historical antecedent as a practice weapon for the Renaissance fencing masters. The Epee or dueling sword is a heavier weapon with a larger cup guard and was developed from the rapier which utilized both the cutting and thrusting elements. The sabre is primarily a cutting weapon which comes to modern times from the cavalry sabre of the Eighteenth century.

Scoring in an intercollegiate match is on the basis one point for a bout, there being twenty-seven bouts in a meet, nine with each weapon. The first round has three bouts with each weapon. Then the participants change opponents for the second round.

An individual bout is scored on the basis of touches; the fencer scoring five touches first wins the bout. The bouts have a

time limit of five minutes and in the event that neither scores five touches in the allotted time, the contestant with the greatest number of touches at the time limit, wins. In the event of a tie the duelist who scores a touch first, wins.

A touch by the foil must be made with the point on the torso. In the epee event, touches are only scored with the point, but can be scored on any part of the body. The sabre target consists of the torso, the head, and the arms, but can be scored with both the point and the blade.

The bout is controlled by a director (referee). His principle function is to determine which touch is made first through his analysis of the play. The judges (or jury) assist him in his decisions by answering his questions with the words "yes," "no," or "abstain."

The Judges stand beside each fencer and watch for the touches which that fencer scores on his opponent. When he sees a touch, he immediately raises his hand to call the director's attention to call a "halt." Judges are not needed, however, when the electric foil or epee is used, for a buzzer sounds and a light

Fencing

By Jay Salmon '63

flashes when a fencer scores a touch.

The matches are fought on a "strip" (mat) which is 50 feet long and 5 feet wide; a fencer who is driven off the mat is allowed to step back on to the two meter mark the first time. The second and each successive time he steps off is scored as a touch for his opponent.

There are several basic maneuvers in a match. The "thrust" is the basic offensive maneuver, the "parry" is a defensive maneuver designed to keep a thrust from scoring and the "reposte" consists of a parry and a thrust.

Equipment of a contestant consists of a full uniform made of white duck, a gauntlet for the sword hand, a mask, and, in electrically scored matches, an electric body cord.

Fencing has a long history at MIT. Joe Levis, '26, was captain of the U. S. 1936 Olympic team and won a silver medal, highest finish to date of any American fencer.

On Deck

Tonight, December 13

Fencing at Harvard, 7:30
Squash at Harvard, F at 4:00, V at 7:00
Frosh Swimming vs. Boston Latin, pool, 7:00
Track (V and F) at Harvard, 6:45

Thursday, December 14

Basketball vs. Bowdoin, Cage, F at 6:30, V at 8:15

Friday, December 15

Rifle at Boston College, Wentworth
Squash at Adelphi, 7:00
Wrestling at Williams (V and F), 4:00
Frosh Hockey vs. Browne & Nichols, Rink, 7:00

Saturday, December 16

Basketball vs. Harvard, Cage, F at 6:30, V at 8:15
Hockey vs. Bowdoin, Rink, 7:00
Squash at Penn, 2:00
Track (V and F) at Northeastern, 1:00

How They Did

Basketball

Northeastern 61, MIT (V) 41
Northeastern 87, MIT (F) 63
Wesleyan 64, MIT (V) 58
MIT (F) 56, Wesleyan 52

Fencing

Harvard 14, MIT (F) 13

Hockey

MIT 5, U. Mass 2
MIT 7, WPI 1
Harvard 15, MIT (F) 1

Rifle

MIT 1402, Bowdoin 1323

Squash

Navy 9, MIT 0

Swimming

MIT (V) 54, U. Mass 39
MIT (F) 47, U. Mass 33
Army 56, MIT (V) 39

Track

Bost. Coll. 84.3, MIT (V) 37.7
Bost. Coll. 57.5, MIT (F) 55.5

Wrestling

Harvard 14, MIT (V) 12
Harvard 21, MIT (F) 15
MIT 17, Andover 9



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Icemen Overcome UMass, WPI; Bowdoin Here Saturday

MIT's fast and versatile hockey team got their season off to a good start with victories over the University of Massachusetts and Worcester Polytechnic Institute last week. Fine offensive teamwork and brilliant goaltending was the winning combination Wednesday night as the engineers outclassed their traditional rivals from UMass, 5-2. Friday, the Techmen played a wide-open game in dumping WPI, 7-1.

The team's next home game will be against Bowdoin at 7:00 on Saturday, December 16; and should prove to be a thrilling contest.

Goaltender Tim O'Brien, '62, played one of the best games in his career in turning back 32 UMass shots in the season opener. While Tech often kept the puck in the offensive zone for extended periods, the opponents' attacks were equally fierce and sustained, shooting as often as five times a second.

Mike Denny, '63, MIT's hard-skating center from Toronto, highlighted the Tech offense with his spectacular shooting and stickwork. The first score of the game came midway in the first period as Denny, taking a nice pass from teammate Doug McMillan, '62, lifted a high shot into the corner of the net from 15 feet out. The score quickly mounted to 3-0 as Billy Vachon, '63, and Jim Holcroft,

'63, each connected in the final minutes of the period.

A tightened defense and rougher checking held the Engineers down in the second period as UMass tried to even the score. The Redmen first broke into the scoring column late in the period as left wing Bob Glew pushed the puck into MIT's open net after a scramble in front of the crease, which

By Phil Schmidt '62

left Tech goalie O'Brien down on the ice and out of position. A fight, with two minutes remaining in the second period, resulted in a UMass defenseman being ejected from the game, giving MIT a valuable one-man advantage for seven minutes. Capitalizing on the break, MIT defenseman Bojey

Salmon, '62, put in a hard slap-shot from the blue line to set the score at 4-1.

UMass came back strong in the third period again taking advantage of a loose puck and a downed goalie, as forward Tom Taylor tipped in their second and last tally of the game.

The final goal of the game occurred midway in the third period, as Denny, picking up a

pass from Salmon at full speed, drove all the way from his own blue line and repeated his high corner shot of the first period.

In Friday's 7-1 romp over WPI, Steve Levy, '62, netted five goals and an assist to lead the team in scoring. John Rupert, '62, and Mike Denny hammered in the other Tech scores.

Levy, a Montreal boy who last year bagged 30 scoring points in 15 games, tallied midway in the first period as Salmon passed up to Rupert, who faked out both defensemen to set up Levy with a perfect pass. Levy's hard low shot caught the corner giving MIT a 1-0 lead. Just three minutes later, with MIT short on penalty, Levy responded by setting up Rupert's goal in exactly the same way.

Although WPI had few shots on the MIT goal, they opened the second period by scoring at the 25 second mark. A scramble behind the net ended as the puck bounced out in front of the net, where WPI center, Jim Kueh, blasted the shot home. The score stood at 2-1.

With WPI a man down on penalty, MIT's power line of Denny, Rupert, and Levy worked the puck around until Denny slipped in a rebound of a shot by Rupert. Two minutes later defenseman Tom Sheahan, '62, backhanded a loose puck to Levy, who let loose with a hard slap-shot that deflected off WPI guard to catch the lower right corner of the net. Levy's third goal of the evening came as he picked up a free puck just inside the blue line, putting MIT ahead, 5-1, with another low shot from 30 feet out.

WPI held the Engineers scoreless until late in the third period, when Levy started behind his own net, skated through the entire opposing team and faked out the goalie for his fourth goal of the game. He closed the scoring a minute later by stealing the puck at WPI's blue line, skating in, and backhanding a 20-footer into the upper right corner.

The icemen played at the University of New Hampshire

Play Harvard Saturday

Cagers Fall To Northeastern, Wesleyan

By J. M. Blew '64

for the home opener last Saturday with Wesleyan.

The tough Wesleyan five opened up with a 10 point burst before Tech broke the ice. Captain Dave Koch '62 suffered a slight ankle sprain and scored only four points in the first half as Tech trailed by 36-21 at halftime. The squad came out fired up and hustling. Koch, Gamble and Jeff Paarz '63 scored well while Koch, Burns and Bill Eagleson '64 controlled the boards.

Fighting and ball-hawking, Tech steadily cut down the margin. With three minutes remaining and MIT trailing by a single point at 51-50, Wesleyan called time and switched to a man to man defense. Tech stayed close and pressed well but committed many ball-handling errors. Wesleyan's 6'6" center Winthrop Davenport scored well underneath to pull them away to a 64-58 win.

The Tech scoring was well balanced as six men had eight or more points, Koch being the leader with 11 while Paarz and Eagleson had 10 each.

Next week features an away game at Bates, Tuesday, and home games Thursday with Bowdoin and, Saturday, the big one with Harvard.

Statistics					N.E.				
MIT	fg	ft	pf	pts	MIT	fg	ft	pf	pts
Eagleson	1	4	2	6	Sears	2	3	3	7
Koch	2	6	3	10	Solberg	5	2	2	12
Burns	1	1	1	3	Tully	3	0	5	6
Gamble	6	2	1	14	Jasper	0	0	1	0
Wyma	0	0	1	0	Ryan	1	2	1	2
Bray	3	0	0	6	Kerrin	0	2	1	2
Paarz	3	0	0	6	Martin	4	2	3	10
Smith	1	0	2	2	Dugan	1	0	0	2
Groninger	0	0	2	0	Malvey	8	3	1	19
Robinson	0	0	1	0	Bowman	0	1	0	1
Totals	14	13	14	41	Totals	24	13	20	61

Statistics					WES.				
MIT	fg	ft	pf	pts	WES.	fg	ft	pf	pts
Koch	5	1	2	11	Davenport	9	5	5	23
Eagleson	4	2	4	10	Brands	1	2	2	4
Gamble	4	0	1	8	Fleischauer	0	0	1	0
Groninger	4	1	2	9	Richey	5	1	1	11
Burns	3	2	0	8	Kerwin	4	6	2	14
Moter	0	1	2	2	Towle	4	6	2	14
Paarz	5	0	3	10	von Seldeneck	4	0	2	8
					Ricketts	1	0	0	2
					Srodes	1	0	0	2
Totals	26	6	13	58	Totals	25	14	13	64

Frosh Split Two

The MIT frosh split two games last week, losing at Northeastern 87-63 and whipping Wesleyan 56-52.

The Northeastern frosh handled the ball and shot well as they led 42-30 at half and won going away. High point men for Tech were Bob Grady with 22 and center George McQuilken with 17.

In the Wesleyan game the Tech frosh led early at 11-5, but Wesleyan got hot, racked up 10 straight and held a precarious 27-23 lead at halftime. Early in the second half the little Engineers were fired up, but Wesleyan fought back to take a 40-32 lead with 12 minutes remaining. Bob Grady and Dick Morgen took charge at this point and Tech earned a 41-41 tie with 9:40 to go. From here on the frosh outscraped Wesleyan and beat a desperation press to win 56-52. Grady was again high man as he scored 28. In his three games this season, Grady is averaging 20 points a game.

The frosh, now 2-1, play at home Thursday and Saturday against Bowdoin and Harvard. Game time for the freshman games is 6:30; for the varsity, 8:15 p.m.

Statistics					NORTH'EN				
MIT	fg	ft	pf	pts	MIT	fg	ft	pf	pts
Grady	7	8	1	22	Anderson	1	1	1	3
Haase	0	0	1	0	Zapustas	0	0	1	0
Yin	1	3	1	5	Phillips	8	3	3	19
Schumaker	0	0	1	0	Fairbanks	3	3	2	9
McQuilken	7	3	3	17	Farrar	3	0	4	6
Larson	2	2	2	6	Coffman	1	0	2	2
Hanson	0	0	1	0	Kelly	7	2	3	16
Seal	2	1	1	5	Mullins	2	0	2	4
Ellerman	0	0	1	0	Pratt	8	3	2	19
Morgan	1	6	3	8	Golembesky	0	1	1	1
Sheaffer	0	0	1	0	Springer	0	2	0	2
					Kilpatrick	0	2	0	2
Totals	20	23	16	63	Totals	35	17	23	87

Statistics					WES'N				
MIT	fg	ft	pf	pts	MIT	fg	ft	pf	pts
Yin	3	0	2	6	Dardani	10	2	4	22
Grady	11	6	2	28	DeBello	4	0	3	8
McQuilken	1	0	2	2	Molse	3	1	2	7
Larson	2	0	2	4	Dixon	4	3	5	11
Seal	2	3	2	7	Kelly	1	0	1	2
Morgen	4	1	1	9	Adams	1	0	3	2
Totals	23	10	11	56	Totals	23	6	18	52

BOX SCORES

MIT 2 3 2
WPI 0 1 0
First Period: Goals: MIT: Levy (Rupert, Salmon) 7:24; Rupert (Levy) 10:24; Penalties: WPI: Elliot (tripping) 2:09; MIT: Cohn (tripping) 9:17; Denny (offensive zone checking) 12:17.
Second Period: Goals: WPI: Kueh (Sheahan (leaving feet) 13:29; (Rupert) 0:25; MIT: Denny (Rupert) 4:37; Levy (Sheahan) 6:41; Levy (unassisted) 12:58. Penalties: WPI: Cohn (tripping) 3:18.
Third Period: Goals: MIT: Levy (unassisted) 11:59; Levy (unassisted) 12:47. Penalties: WPI: Valle (charging) 6:24.



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Swimmers Divide Two Meets

By Ronald Davis '63

Wednesday the MIT swimmers swept to their strongest win of the season by felling the University of Massachusetts team 54-39; only to turn around Friday night and lose to Army 56-39.

The UMass team proved to be no match for the Engineers as the varsity set one record and tied another on their way to the win. In the 50 yard freestyle event Wayne Matson '64 tied the MIT varsity record with a 23.7 clocking. Matson took an early lead and was never headed. Joe Schrade '63 took second in the event. In the very next event, the 200 yard individual medley, Tom Ising '62 opened a wide gap ahead of the next man and swam to a new varsity record of 2:21.1 (old record 2:24.8).

Other MIT first places were taken by Captain Jed Engeler '62 in the 220 yard freestyle, Lou Thomson '63 in the diving, and the team of Tim Sloat '63, Dave Carey '62, Ron Matlin '63 and Dave Stein '62 in the 400 yard medley relay.

A surprise finish in the 200 yard breaststroke had Stein, a freestyler, testing his strength in the breaststroke, finish only

a short distance behind the winner.

In the Army meet Friday the swimmers lost to a powerful Army squad 56-39. In the first event the Army team showed its potential by winning the 400 yard medley relay in a MIT pool record time. The meet was not without its exciting races, however, as Engeler came back in the second event, the 220 yard freestyle, to match Kilroy of Army stroke for stroke the entire race before finally pulling out and winning in the last 20 yards. Other highlights came for the MIT team when Matlin swept to a win in the 100 yard butterfly. Matlin was behind at the halfway mark but came on with a burst of speed in the last 50 to win by about three yards. Matson provided Tech's other individual win by taking the 100 yard freestyle. In the 400 yard freestyle relay the Engineer team of Leon Kaatz '64, Bob Geroch '64, Carey and Matson swam to a victory in a close race.

In the frosh meet against UMass, the freshmen extended their victory streak to two by taking the meet 47-33. Outstanding performance was made by Jay Howard '65, winner of

the 200 yard individual medley, the 100 yard backstroke; he also swam a leg of the 400 yard medley relay.

Classified Ads on Page

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